# XR-4140/4147/4150/4157

# SERVICE MANUAL

*US Model*
*Canadian Model*
XR-4147/4157
*AEP Model*
XR-4150
*E Model*
XR-4140/4150

Photo : XR-4147

Photo : XR-4150

| | |
|---|---|
| Model Name Using Similar Mechanism | XR-4057 |
| Tape Transport Mechanism Type | MG-36VJ-32 |

## SPECIFICATIONS

**Power amplifier section**

Outputs — Speaker outputs (sure seal connectors)
Speaker impedance — 4 – 8 ohms
Maximum power output — 22 W + 22 W (at 4 ohms)*
*Measured at 14.4 V

**Cassette player section**

Tape track — 4-track 2-channel stereo
Frequency response — 30 – 15,000 Hz
Signal-to-noise ratio — 55 dB
Wow and flutter — 0.15% (WRMS)

**Tuner section**

**FM**

Tuning range — For the European model: 87.5 – 108 MHz
For other models: 87.9 – 107.9 MHz
Antenna terminal — External antenna connector
Intermediate frequency — 10.7 MHz
Usable sensitivity — 15 dBf (75 ohms)
Selectivity — 70 dB at 400 kHz
Signal-to-noise ratio — 66 dB (stereo), 69 dB (monaural)
Harmonic distortion at 1 kHz — 0.9% (stereo), 0.5% (monaural)
Separation — 35 dB at 1 kHz
Frequency response — 30 – 15,000 Hz
Capture ratio — 2 dB

**AM**

AM tuning interval — For the European model: 9 kHz
For other models: 9 kHz/10 kHz switchable
Tuning range — For the European model: 531 – 1,602 kHz (at 9 kHz step)
For other models: 531 – 1,602 kHz (at 9 kHz step) 530 – 1,620 kHz (at 10 kHz step)
Antenna terminal — External antenna connector
Intermediate frequency — 450 kHz
Sensitivity — 35μV

**General**

Output lead — Power antenna relay control lead
Tone controls — Bass: 0 to +10 dB at 100 Hz
Treble: ±8 dB at 10 kHz
Power requirements — 12 V DC car battery (negative ground)
Dimensions — Approx. 178 × 50 × 165 mm (w/h/d)
Mounting dimensions — Approx. 182 × 53 × 145 mm (w/h/d)
Weight — Approx. 1.4 kg
Accessories supplied — Mounting hardware (1 set)

Design and specifications subject to change without notice.

## FM/AM CASSETTE CAR STEREO

SONY®

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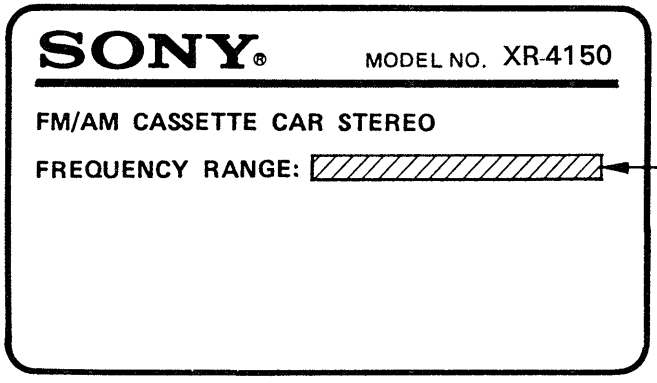
### XR-4150 MODEL IDENTIFICATION

—Specification Label—



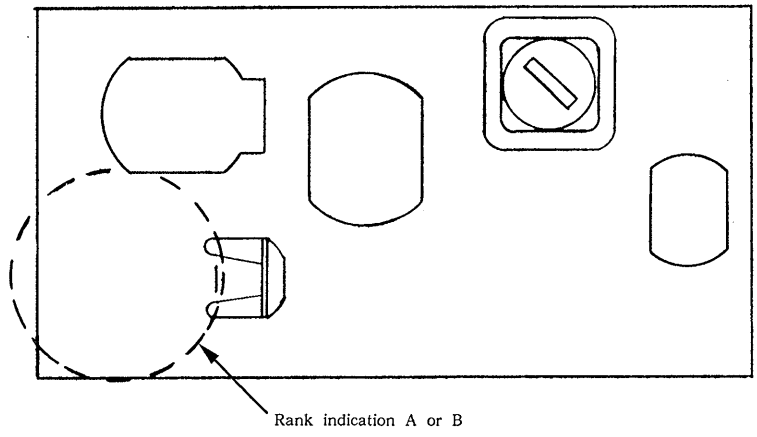

AEP model : FM 87.5—108MHz
AM 531—1,602kHz
E model : FM 87.9—107.9MHz
AM 530—1,620kHz with 10kHz spacing
AM 531—1,602kHz with 9kHz spacing

## ※ Precautions for servicing

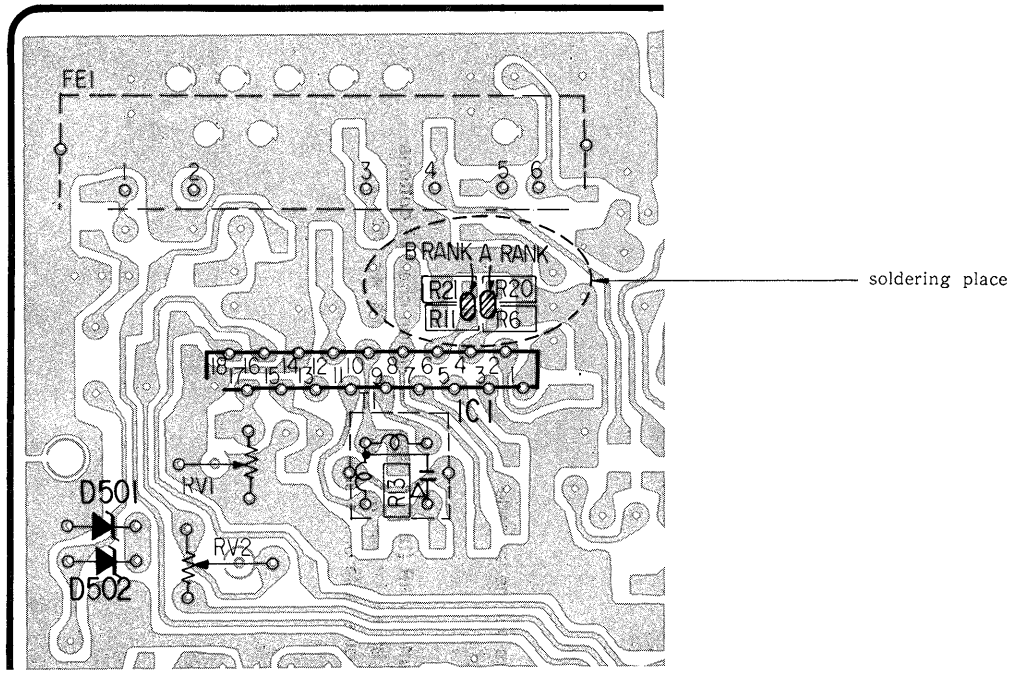
### Replacement of the front-end

When replacing the front-end (FE1), solder between R6 and R20 for the A rank, and between R11 and R21 for the B rank, in accordance with the ranking.

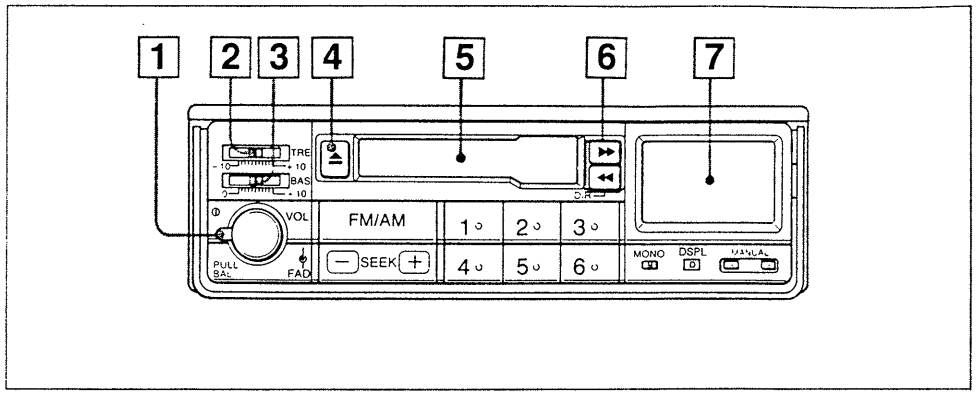
Front-end (FE1)

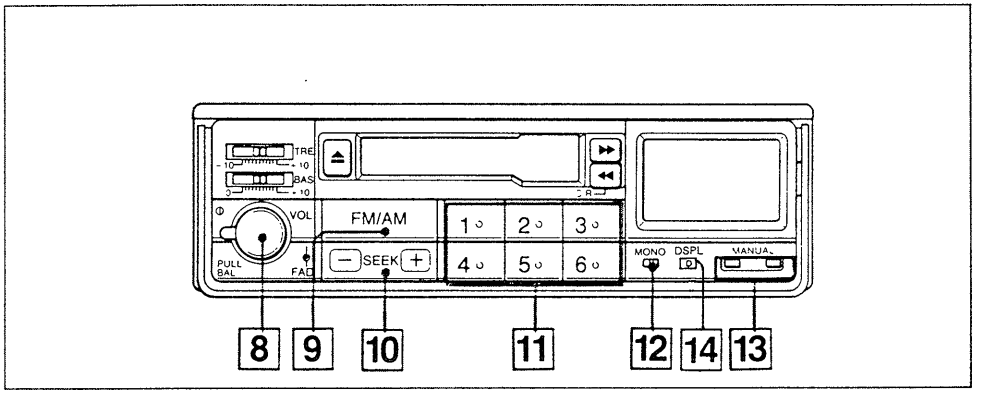



**[MAIN BOARD]** (CONDUCTOR SIDE)



# SECTION 1
# GENERAL




**1 FAD (fader) control**
Turn clockwise to decrease the volume of the rear speakers or counterclockwise to decrease the volume of the front speakers.

**2 TRE (treble) level control**

**3 BAS (bass) boost control**

**4 ⏏ (eject) button**
Press to stop the tape and take out the cassette.

**5 Cassette insertion door**

**6 ◀◀ / ▶▶ (fast winding) buttons/DIR (tape transport direction change) buttons**
During playback, depress ◀◀ or ▶▶ for fast winding, or press both ◀◀ and ▶▶ simultaneously to listen to the other side of the cassette.

**7 Display window**

**8 Power on·off switch/VOL (volume) control/PULL BAL (balance) control**

| | |
|---|---|
| **Power on·off switch** | Press to turn on and off the unit. |
| **VOL control** | Turn clockwise to increase volume and counterclockwise to decrease. |
| **PULL BAL control** | While pulling the control, turn to adjust the balance of the left and right channel output. |

**9 FM/AM band selector**
Press to select the desired band, FM 1, FM 2, or AM.

**10 SEEK −/+ button**
Press − side to search for lower frequencies and + side for higher frequencies.

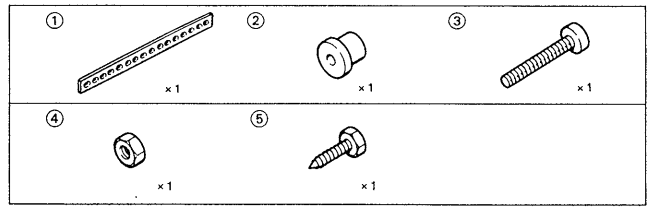
**11 Preset buttons**

**12 MONO (monaural) button**
Press to reduce noise during reception of a weak FM stereo program. To listen to in stereo, press it again.

**13 MANUAL −/+ button**
Press to tune in the desired station manually.

**14 DSPL (display) button (Provided only for XR-4147)**
Press to display the time indication during radio reception.

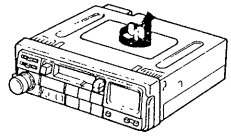
XR-4150/4157 :



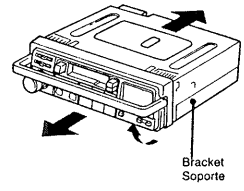

XR-4150/4157 :

## To Install the Unit in the Dashboard
## Para fijar la unidad en el salpicadero

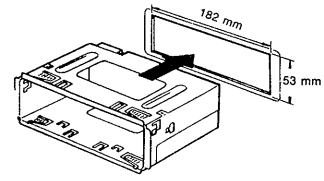
**1** Remove the transit lock by turning it 90°.
Quite el seguro de transporte girándolo 90°.



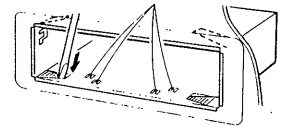
**2** Remove the bracket.
Quite el soporte.



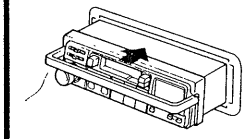

**3** Install the bracket in the dashboard.
Instale el soporte en el salpicadero.




Bend these claws, if necessary.
Doble estas uñas; si es necesario.



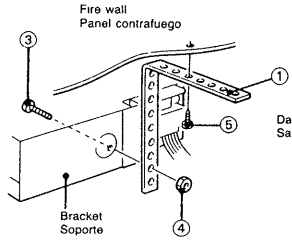
**4** Secure the unit.
Asegure la unidad.



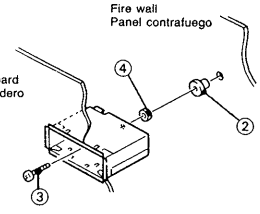
Push in the unit until it is locked firmly.
Empuje la unidad hasta que se enganche firmemente.

## To Support the Unit
## Para fijar la unidad

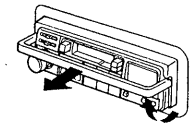
**Example 1**
**Ejemplo 1**




**Example 2**
**Ejemplo 2**




## To Remove the Unit
## Para extraer la unidad



This prevents your car stereo set from being stolen.

Así evitará que le roben el sistema estéreo para automóviles.

# XR-4150/4157 : Connections

## Caution

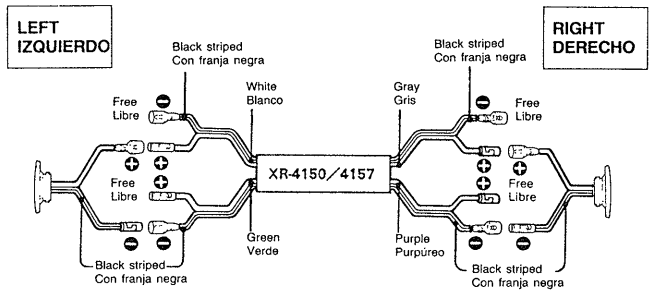
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **red** power input lead only after all other leads are connected. And be sure to connect it to the positive 12 V power terminal. It will be energized when the ignition key is set to the accessory position.
- **Run all ground wires to a common ground point.**

## Precauciones

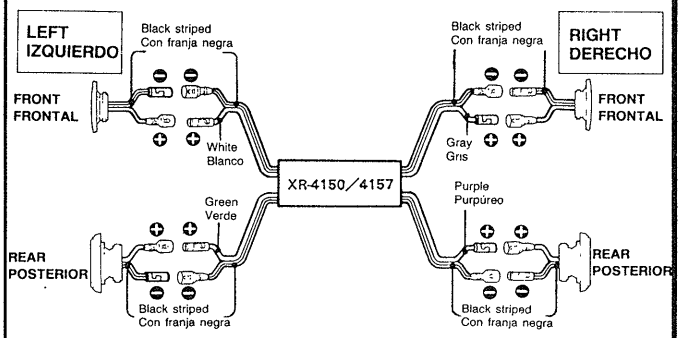
- Esta unidad ha sido diseñada para funcionar solamente con 12 V CC y negativo a masa.
- Antes de realizar las conexiones, desconecte el terminal de masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte el conductor de entrada de alimentación **rojo** después de haber conectado los demás. No se olvide de conectarlo al terminal de allmentación de 12 V positivo. Este conductor deberá excitarse al poner la llave de encendido en la posición para accesorios.
- **Conecte todos los teminales de masa a un punto común del automóvil.**

## Speaker Connection
## Conexión de los altavoces

### 2-speaker connection
### Conexión de un sistema de 2 altavoces




### 4-speaker connection
### Conexión de un sistema de 4 altavoces



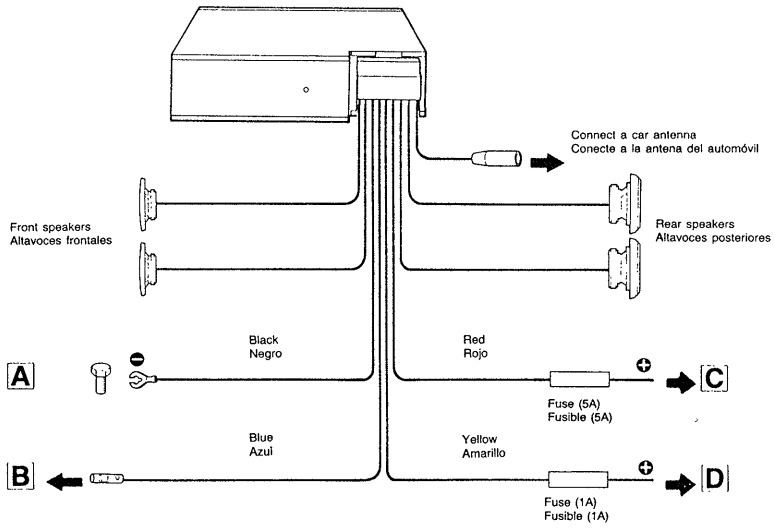

**Notes on speaker connection**

- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.

**Notas sobre la conexión de altavoces**

- Emplee un sistema de altavoces de 4 a 8 ohmios de impedancia y con la potencia admisible adecuada. De lo contrario, los altavoces podrían dañarse.
- No conecte los terminales de los altavoces al chasis del automóvil ni conecte los terminales del altavoz derecho a los del izquierdo.

## Connection Diagram
## Diagrama de conexiones




[A]: to a metal point of the car

[B]: to the power antenna relay control box (Maximum supply current 0.1 A)

[C]: to the +12 V power terminal which is energized with the ignition key in the accessory position

[D]: to the +12 V power terminal which is energized at all times

**Cord color**
Red: Power input lead
Yellow: Power input lead
Blue: Power antenna relay control lead
Black: Ground wire

[A]: a un punto metálico del automóvil

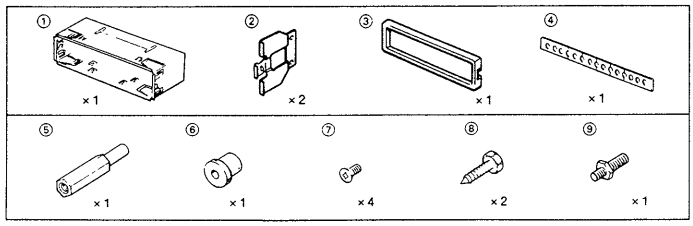
[B]: a la caja de control po. relé de la antena motorizada (suministro máximo de corriente 0,1 A)

[C]: al terminal de alimentación de +12 V que se excita al poner la llave de encendido en la posición para accesorios

[D]: al terminal de alimentación de +12 V que está siempre excitado

**Color de los conductores**
Rojo: conductor de entrada de alimentación
Amarillo: conductor de entrada de alimentación
Azul: conductor de control por relé de la antena motorizada
Negro: conductor de puesta a carrocería

XR-4140/4147 :

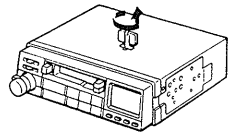



XR-4140/4147 :

# Installation
# Installation

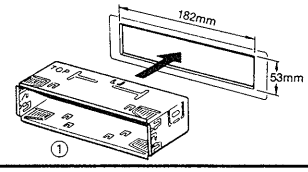
## Basic Installation/Installation de base

**1**

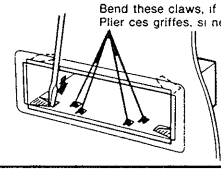


Remove the transit lock by turning it 90°.
Enlever la vis de transport en la tournant de 90 degrés.

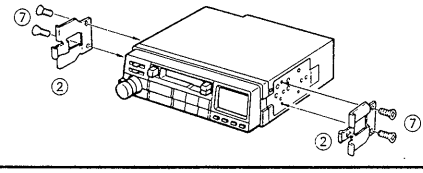
**2**



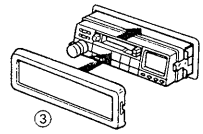

**3**



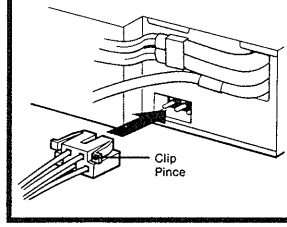

**4**




**5**



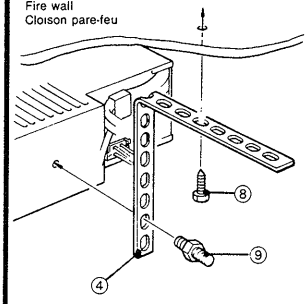

## Power Cord Attachment
## Fixation du cordon d'alimentation



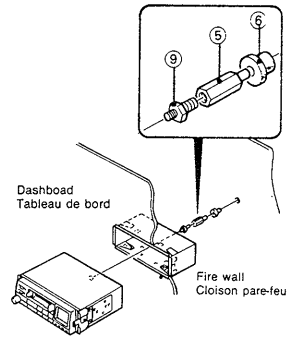

**To remove,** push in the clips, and pull it out.
**Pour retirer,** pousser sur les pinces et tirer sur le connecteur.

## To Support the Unit
## Pour supporter l'appareil

**Example 1**
**Exemple 1**




**Example 2**
**Exemple 2**



XR-4140/4147 :

# Connections
# Connexions

## Caution

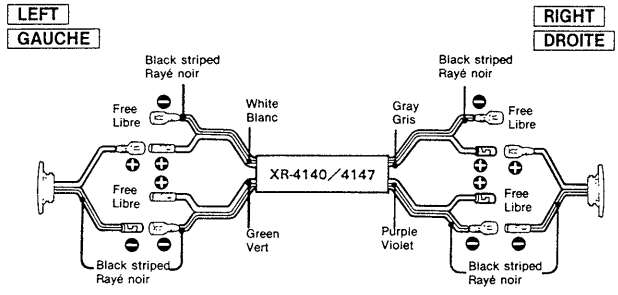
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **red** power input lead only after all other leads are connected. And be sure to connect it to the positive 12 V power terminal. It will be energized when the ignition key is set to the accessory position.
- **Run all ground wires to a common ground point.**

## Attention

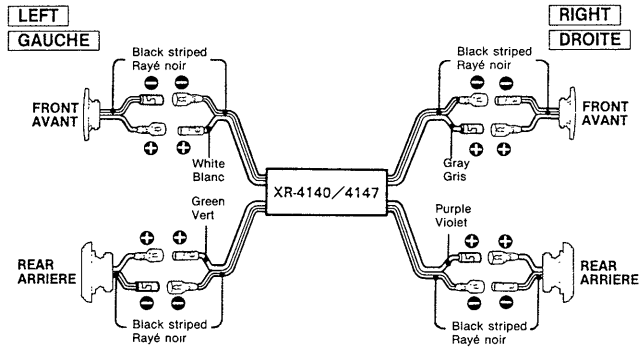
- Cet appareil est uniquement conçu pour un fonctionnement sur courant continu de 12 volts avec masse négative.
- Avant d'effectuer les connexions, déconnecter la borne de masse de la batterie de voiture pour éviter un court-circuit.
- Connecter le fil d'alimentation **rouge** uniquement une fois que tous les autres fils ont été connectés. S'assurer de le connecter à la borne de 12 volts positif. L'alimentation est fournie lorsque la clé de contact est mise sur la position accessoire.
- **Faire cheminer tous les fils de masse à une masse commune.**

## Speaker Connection
## Connexion des haut-parleurs

**2-spaker connection**
**Connexion de deux haut-parleurs**




**4-speaker connection**
**Connexion de quatre haut-parleurs**



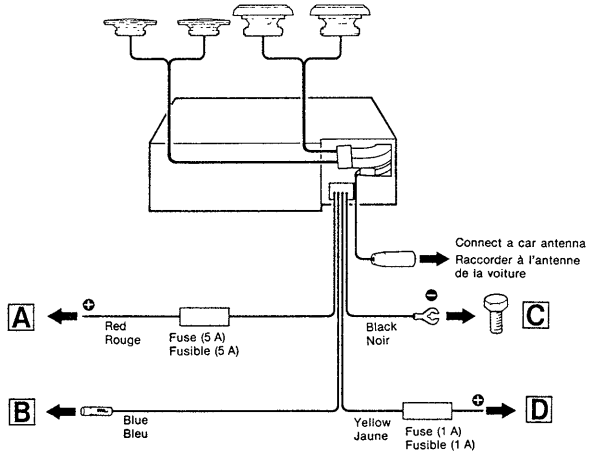

**Notes on speaker connection**

- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.

**Remarques sur la connexion des haut-parleurs**

- Utiliser des haut-parleurs d'une impédance de 4 à 8 ohms et ayant une puissance nominale adéquate. Dans le cas contraire, les haut-parleurs peuvent être endommagés.
- Ne pas connecter les bornes du système de haut-parleur au châssis de la voiture et ne pas connecter non plus les bornes des haut-parleurs de droite avec celles des haut-parleurs de gauche.

## Connection Diagram
## Schéma des connexions




A To the +12 V power terminal which is energized with the ignition key in the accessory position
B To the power antenna relay control box (Maximum supply current 0.1 A)
C To a metal point of the car
D To the +12 V power terminal which is energized at all times

**Cord color**
Red: Power input lead
Yellow: Power input lead
Blue: Power antenna relay control lead
Black: Ground wire

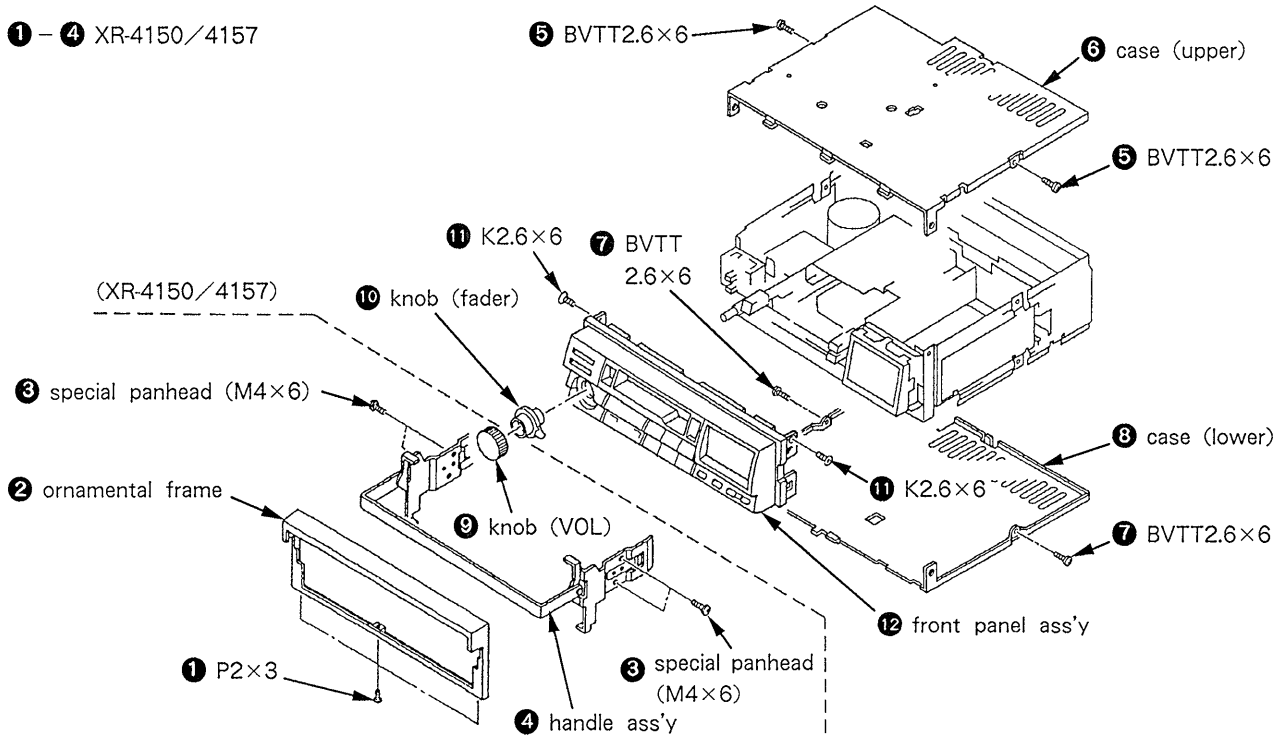
A à la borne d'alimentation de +12 volts qui est énergétisée lorsque la clé de contact est sur la position accessoire
B au boîtier de contrôle de relais d'antenne moteur (Courant d'alimentation maxium 0,1 A)
C à un point métallique de la voiture
D à la borne d'alimentation de +12 volts qui est énergétisée tout le temps

**Couleur des cordons**
Rouge: Fil d'entrée d'alimentation
Jaune: Fil d'entrée d'alimentation
Bleu: Fil de contrôle de relais d'antenne moteur
Noir: Fil de masse

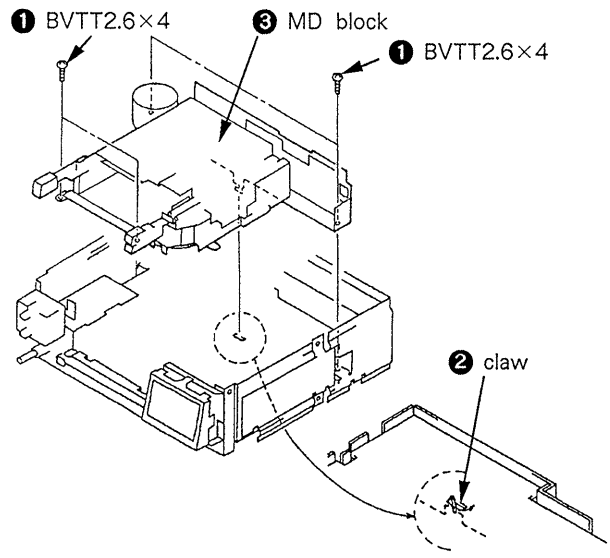
# SECTION 2
# DISASSEMBLY

**Note :** Follow the disassembly procedure in the numerical order given.

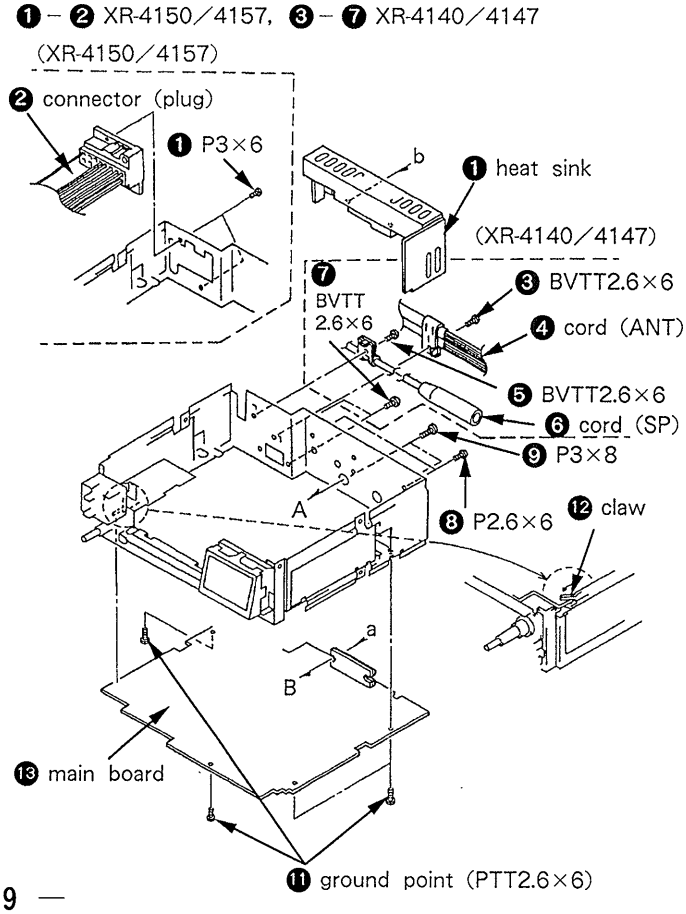
**[FRONT PANEL]**




**[MD BLOCK]**




**[MAIN BOARD]**



# SECTION 3
# ADJUSTMENTS

## 3-1. MECHANICAL ADJUSTMENT

No mechanical adjustments applied to this unit.

### ● Torque Measurement

| Mode | Torque Meter | Torque |
|---|---|---|
| FWD | CQ-102C | 40 to 75 g · cm (0.56 to 1.04 oz · inch) |
| REV | CQ-102RB | |
| Back tension | CQ-102B | 1.5 to 5 g · cm (0.02 to 0.07 oz · inch) |
| FF | CQ-201B | 45 to 150 g · cm (0.62 to 2.08 oz · inch) |
| REW | | |

## 3-2. ELECTRICAL ADJUSTMENTS

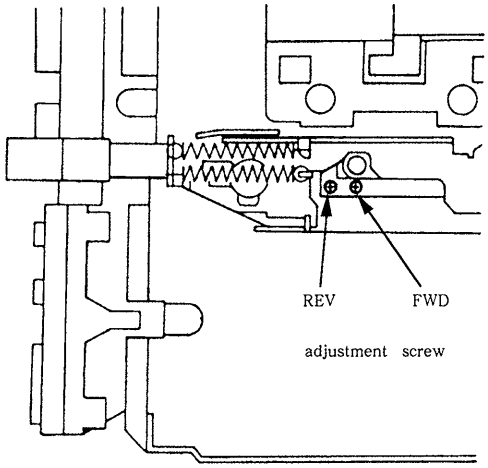
**Note :** The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

- Power-supply voltage is +14.4V DC as per Ad Hoc recommendation.
- Switches and controls should be set as follows unless otherwise specified.

PUSH RADIO switch : RADIO
PULL BALANCE control : center click

### TAPE SECTION

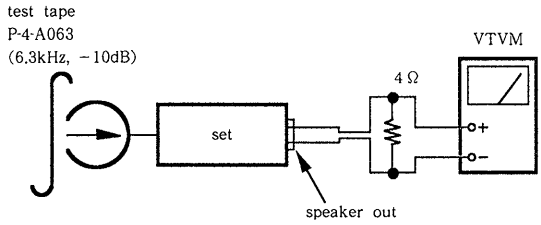
**Adjustment Location :**




### Playback Head Azimuth Adjustment

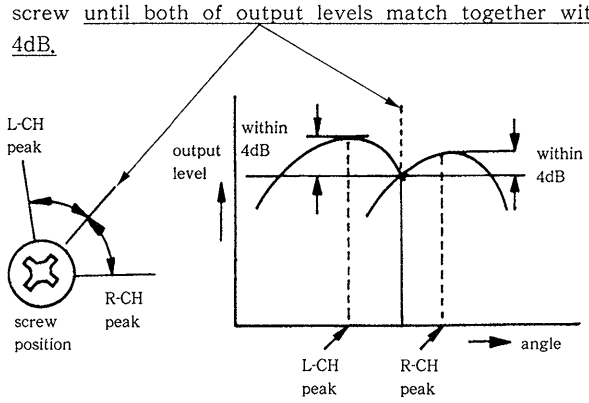
**Procedure :**

1. Mode : playback

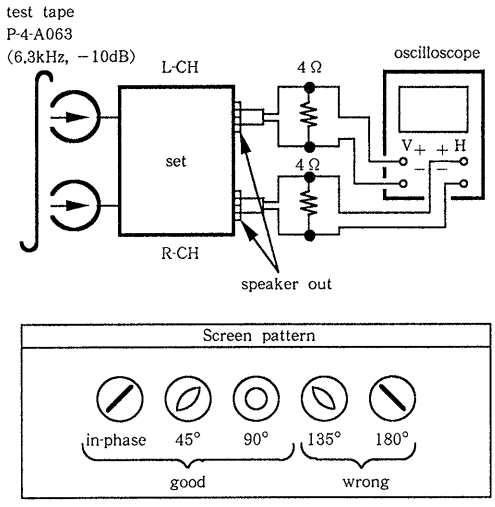



Adjust for forward ( ▶ ) direction and reverse ( ◀ ) direction.

2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 4dB.




3. Phase Check
Confirm that phase difference between L-channel and R-channel is within 90°

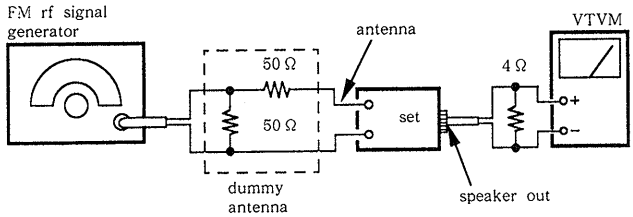



4. Repeat the above adjustment for reverse playback mode.
5. After the adjustment, lock the screw with locking compound.

## FM Stereo Separation Adjustment

**Setup :**

BAND : FM Stereo
Frequency : 98.1MHz : US, Canadian
98.0MHz : E, AEP




Carrier frequency : 98.1MHz : US, Canadian
98.0MHz : E, AEP
Output level : 70dB (3.15mV)
Modulation : 1kHz
main : 33.75kHz dev.
sub : 33.75kHz dev.
19kHz pilot : 7.5kHz dev.

**Procedure :**

Adjust RV3 for a best stereo separation.

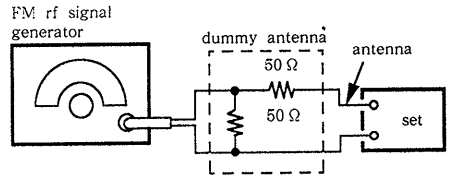
| FM stereo signal generator output channel | VTVM connection | VTVM reading (dB) |
|---|---|---|
| L-CH | L-CH | Ⓐ |
| R-CH | L-CH | Ⓑ Adjust RV3 for minimum reading. |
| R-CH | R-CH | Ⓒ |
| L-CH | R-CH | Ⓓ Adjust RV3 for minimum reading. |

L-CH stereo separation : Ⓐ - Ⓑ
R-CH stereo separation : Ⓒ - Ⓓ
The separations of both channels should be equal.

## Stereo Auto Hi-blend Adjustment

**Setup :**

BAND : FM Stereo
Frequency : 98.1MHz : US, Canadian
98.0MHz : E, AEP

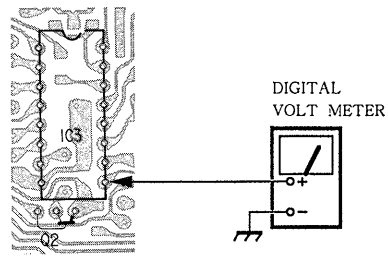



Carrier frequency : 98.1MHz : US, Canadian
98.0MHz : E, AEP
Mode : monaural, no modulation
Output level : 40dB (100 μ V)

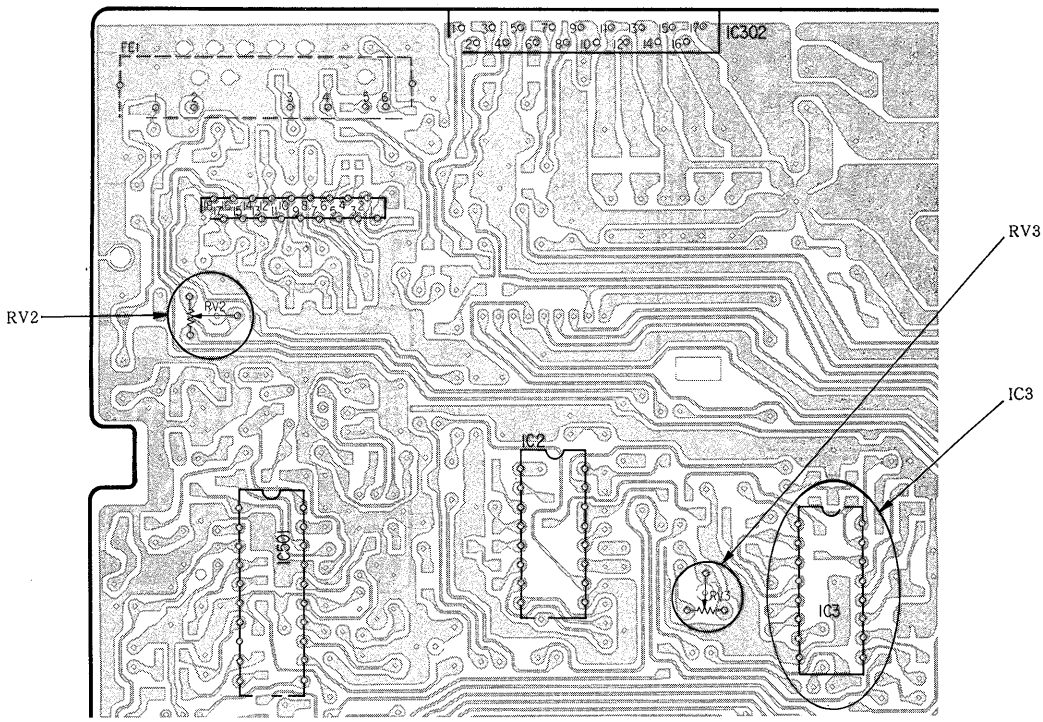
**Procedure :**

Adjust RV2 so that voltage at terminal ⑧ of IC3 is 0.6±0.01V when the FM rf signal generator is L-ch or R-ch output only.

**Adjustment Location :** main board



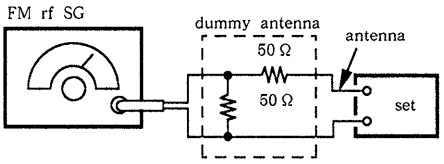

**Adjustment Location :** main board



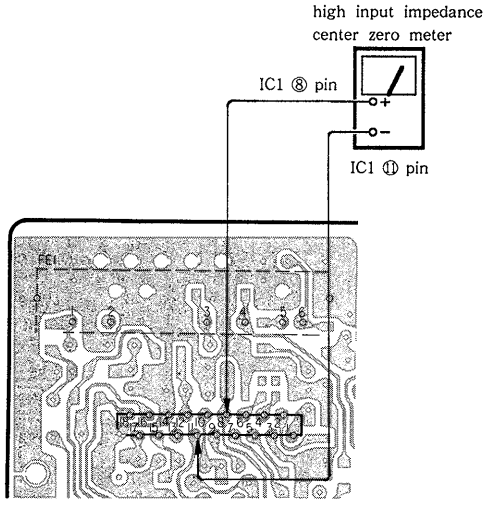
## FM Discriminator Adjustment

**Setting :**

BAND : FM MONO




Carrier frequency : 98.1MHz : US, Canadian
98.0MHz : E, AEP
Output level : 60dB (1mV)
Modulation : 1kHz, 75kHz deviation (100%)




**Procedure :**

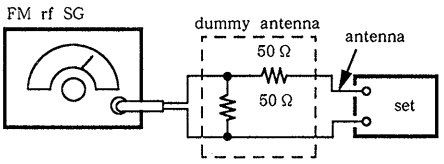
1. Slowly adjust the core of T1 to obtain a zero (0) V reading on high impedance center zero meter.

**Adjustment Location :** Main board.

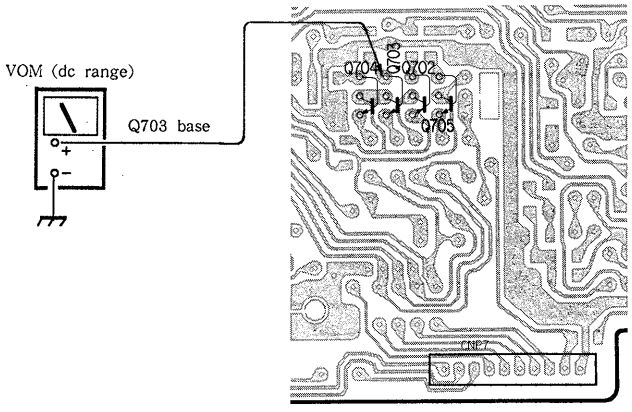
## FM Auto-scan Stop Level Adjustment

**Setup :**

Band switch : FM MONO
Frequency : 98.1MHz : US, Canadian
98.0MHz : E, AEP

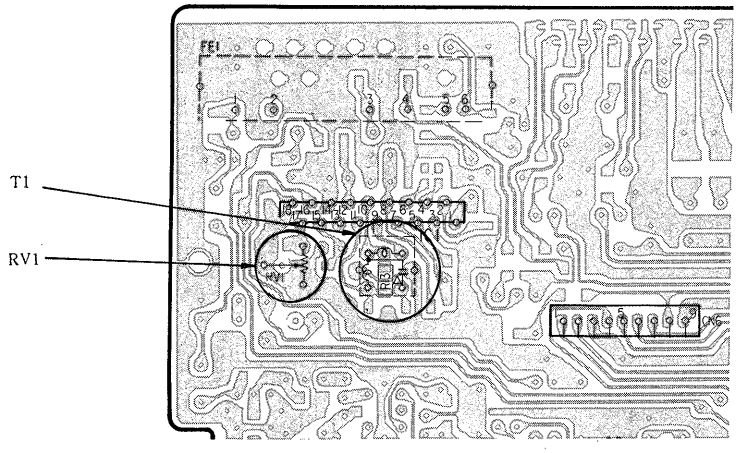



Carrier frequency : 98.1MHz : US, Canadian
98.0MHz : E, AEP
Modulation : no modulation
Output level : 25dB




**Procedure :**

1. Adjust RV1 at the point where the VOM reading changes from low to high.
2. Confirm that the set stops auto-scanning with FM RF SSG output level set at 25±2dB.
   Confirm that the set does not stop auto-scanning at level of (stop level+1) dB.



## AM SECTION

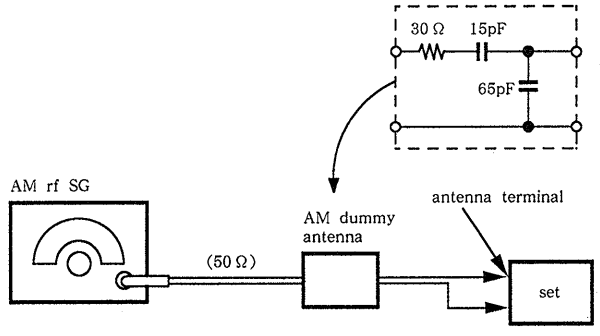
### AM Auto-scan Stop Level Adjustment

**Note** :Be sure to perform this adjustment after "FM Auto-scan Stop Adjustment".

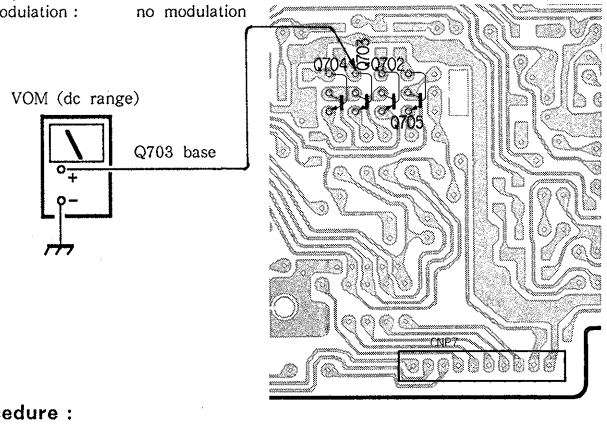
Setup :

Band : MW

Frequency : 1000kHz : XR-4140/4147/4157
999kHz : XR-4150




Carrier frequency : 1000kHz : XR-4140/4147/4157
999kHz : XR-4150
Output level : 35dB
Modulation : no modulation

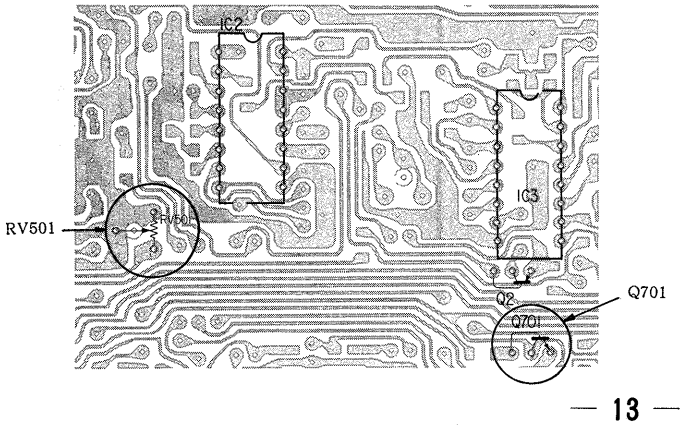



**Procedure :**

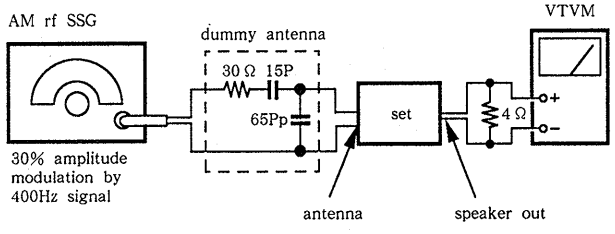
1. Adjust RV501 at the point where the VOM reading changes from low to high.
2. Confirm that the set stops auto-scanning with AM RF SG output level set at 35±2dB.
   Confirm that the set does not stop auto-scanning at level of (stop level+1) dB.

**Note** :When adjusting connect Q701 base to the ground.

**Adjustment Location** : main board




**Setting :**



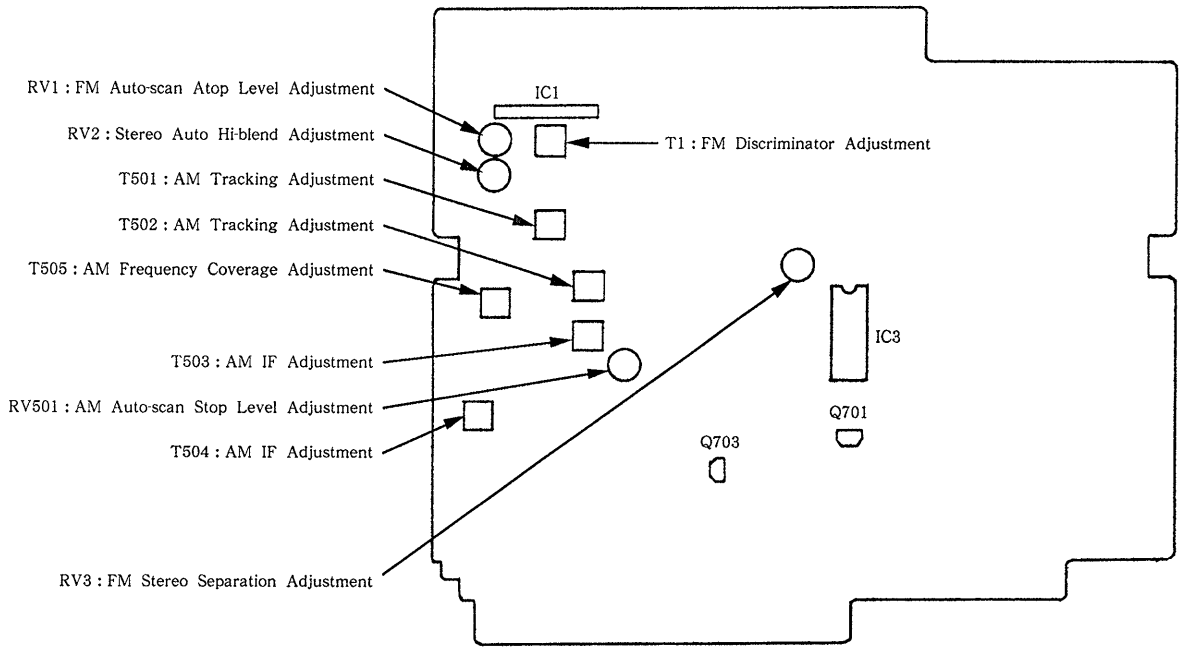

| AM IF ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VTVM. | |
| T503, 504 | 450kHz |

| AM TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VTVM. | |
| T501<br>T502 | XR-4140/4147/4157 : 600Hz<br>XR-4150 : 603Hz |

| AM FREQUENCY COVERAGE ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VTVM. | |
| T505 | XR-4140/4147/4157 : 530Hz<br>XR-4150 : 531kHz |

## ADJUSTMENT LOCATION

【MAIN BOARD】(CONDUCTOR SIDE)


RV1 : FM Auto-scan Atop Level Adjustment
RV2 : Stereo Auto Hi-blend Adjustment
T501 : AM Tracking Adjustment
T502 : AM Tracking Adjustment
T505 : AM Frequency Coverage Adjustment
T503 : AM IF Adjustment
RV501 : AM Auto-scan Stop Level Adjustment
T504 : AM IF Adjustment
RV3 : FM Stereo Separation Adjustment
IC1
T1 : FM Discriminator Adjustment
IC3
Q701
Q703

# SECTION 4
# DIAGRAMS

## 4-1. SEMICONDUCTORS LEAD LAYOUT

LA1145

2SC2001-L

AA3822K

TA8205HA

2SD1802

BG3822K-104

μPC1228HA

2SK523-L2

LC50Y/CD

μPD1708AG-826-00

1SS101

DSA3A4



2SA1150
2SA1175-HFE
2SC2785-HFE
2SD1020-F
2SD1021

11ES2
1SS119
RD10ES-B2
RD16ES-B2
RD5.6ES-B2
RD6.2ES-B2
RD8.2ES-B2
RD9.1ES-B2

SVC321SP-C3

2SC2840-D

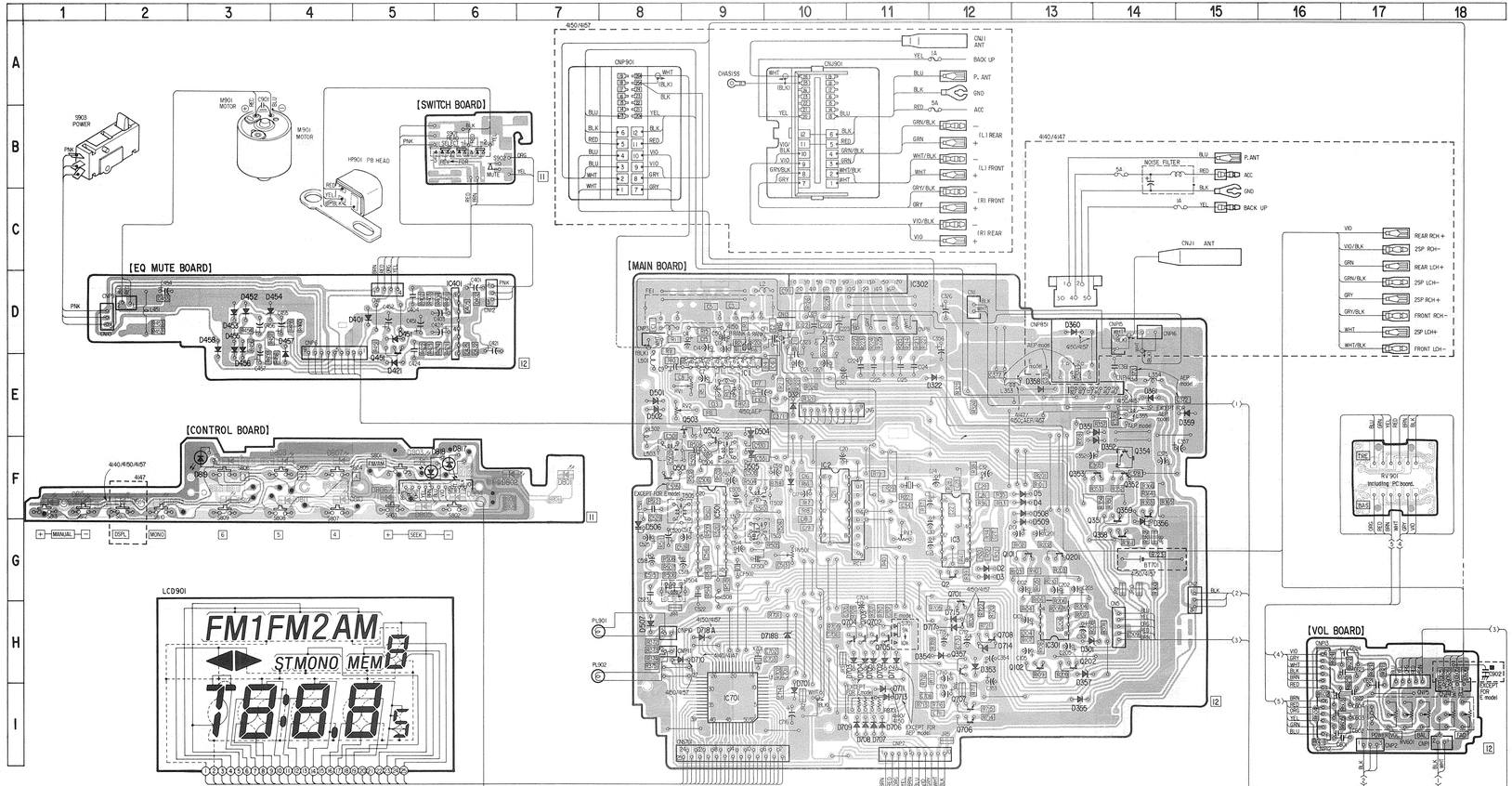
Note :

- ○—: parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▒▒▒ : Pattern on the side which is seen.
- ▒▒▒ : Pattern of the rear side.
- □ : Chip components extracted from the rear side.

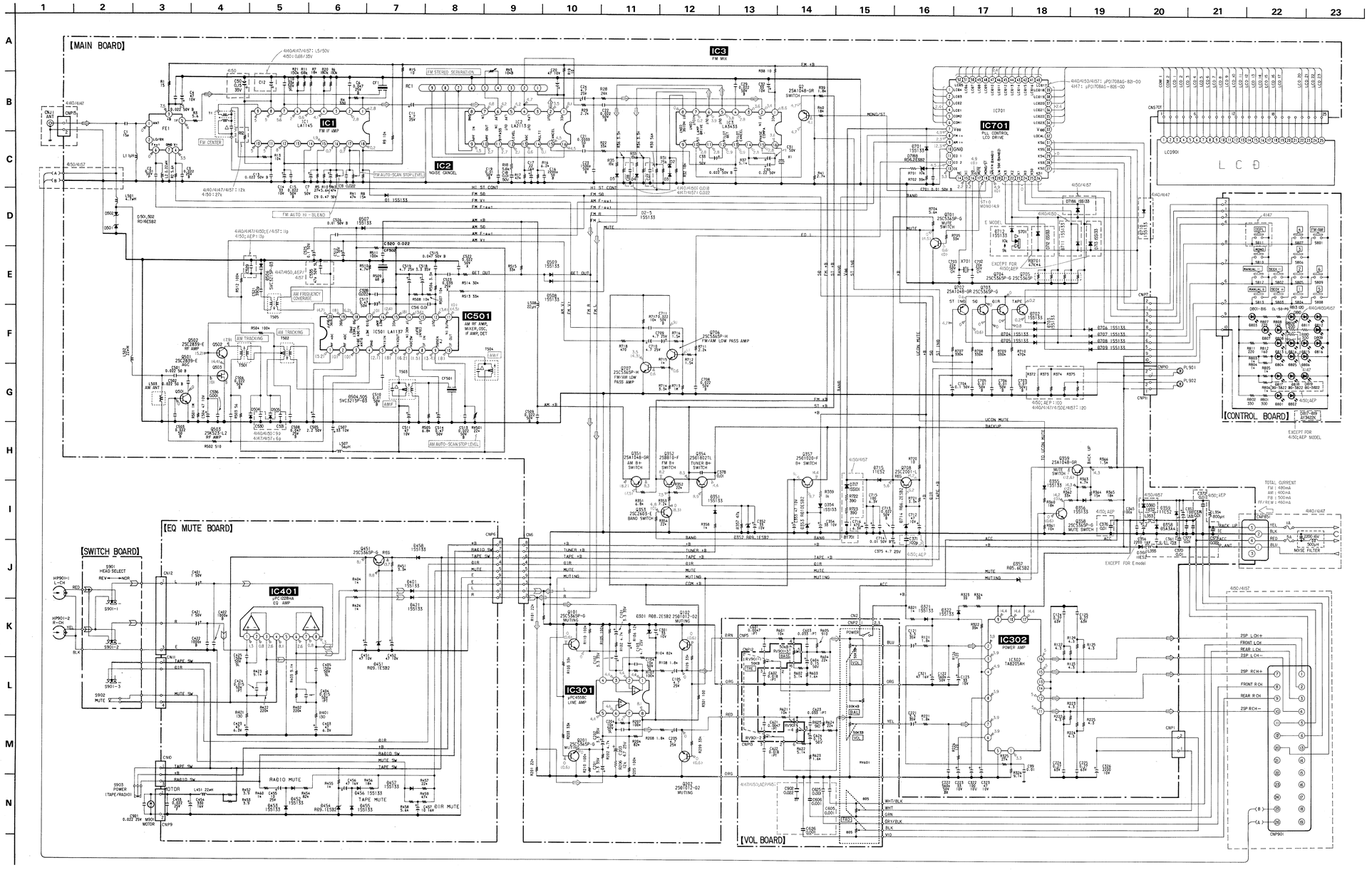
## ● SEMICONDUCTOR LOCATION

| Ref. No. | Location | Ref. No. | Location |
|---|---|---|---|
| IC1 | E-9 | D451 | D-5 |
| IC2 | F-10 | D452 | D-3 |
| IC3 | G-12 | D453 | D-3 |
| IC301 | H-13 | D454 | D-3 |
| IC401 | D-6 | D455 | D-3 |
| IC501 | G-9 | D456 | D-3 |
| IC701 | I-9 | D457 | D-4 |
| | | D458 | D-3 |
| | | D501 | E-8 |
| Q2 | G-12 | D502 | E-8 |
| Q101 | G-13 | | |
| Q102 | H-13 | D504 | E-9 |
| Q201 | G-13 | D505 | F-9 |
| Q202 | H-13 | D506 | G-8 |
| | | D507 | H-8 |
| Q351 | G-14 | D508 | F-13 |
| Q352 | F-14 | | |
| Q353 | F-14 | D509 | G-13 |
| Q354 | F-14 | D701 | I-10 |
| Q357 | H-12 | D702 | H-11 |
| | | D703 | H-11 |
| Q358 | G-14 | D704 | H-11 |
| Q359 | F-14 | | |
| Q451 | E-5 | D705 | H-11 |
| Q501 | F-8 | D706 | I-11 |
| Q502 | F-9 | D707 | I-11 |
| | | D708 | I-11 |
| Q503 | E-9 | D709 | I-11 |
| Q701 | H-12 | | |
| Q702 | H-11 | D710 | H-8 |
| Q703 | H-11 | D711 | I-11 |
| Q704 | H-11 | D712 | H-11 |
| | | D713 | I-11 |
| Q705 | H-11 | D714 | H-12 |
| Q706 | I-12 | | |
| Q707 | I-12 | D715 | H-12 |
| Q708 | H-12 | D717 | H-12 |
| | | D718A | H-9 |
| | | D718B | H-10 |
| D1 | F-10 | D801 | F-7 |
| D2 | G-12 | | |
| D3 | G-12 | D802 | F-6 |
| D4 | F-13 | D803 | F-5 |
| D5 | F-13 | D804 | F-6 |
| | | D805 | F-5 |
| D301 | H-13 | D806 | F-5 |
| D321 | E-10 | | |
| D322 | E-12 | D807 | F-4 |
| D351 | E-14 | D808 | F-4 |
| D352 | F-14 | D809 | F-3 |
| | | D810 | F-4 |
| D353 | H-12 | D811 | F-4 |
| D354 | H-12 | | |
| D355 | I-13 | D812 | F-3 |
| D356 | G-14 | D813 | F-2 |
| D357 | H-13 | D814 | F-2 |
| | | D815 | F-1 |
| D358 | E-13 | D816 | F-1 |
| D359 | E-15 | | |
| D360 | D-13 | D817 | F-6 |
| D361 | E-14 | D818 | F-5 |
| D401 | D-5 | D819 | F-3 |
| D421 | E-5 | | |

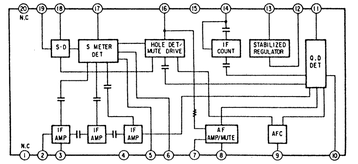
## 4-2. PRINTED WIRING BOARDS



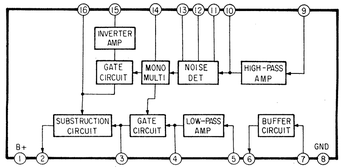
## 4-3. SCHEMATIC DIAGRAM



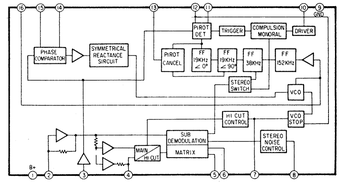

### IC1 LA1145



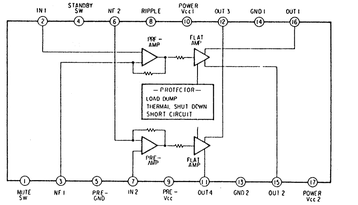

### IC2 LA2113



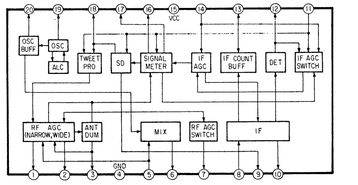

### IC3 LA3433




### IC302 TA8205AH



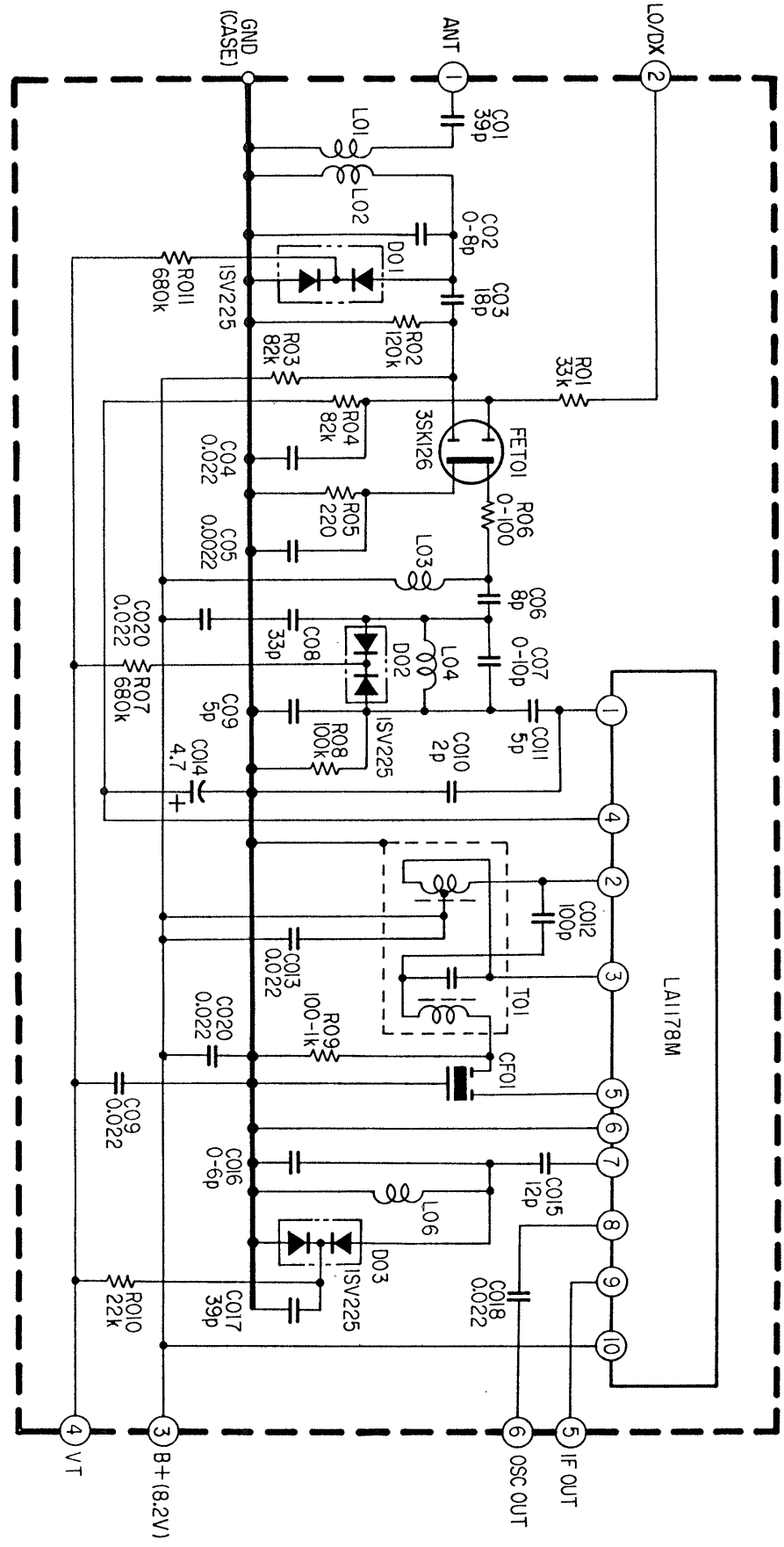

### IC501 LA1137




Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- ▭▭ : B+ Line
- ▭ : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 14.4V and fed with regulated dc power supply from battery and accessory terminal.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM or TAPE
- ( ) : AM
- ( ) : SEEK or FF/REW
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- ⇨ : FM ⇨ : PB

FM/AM FRONT END SCHEMATIC DIAGRAM

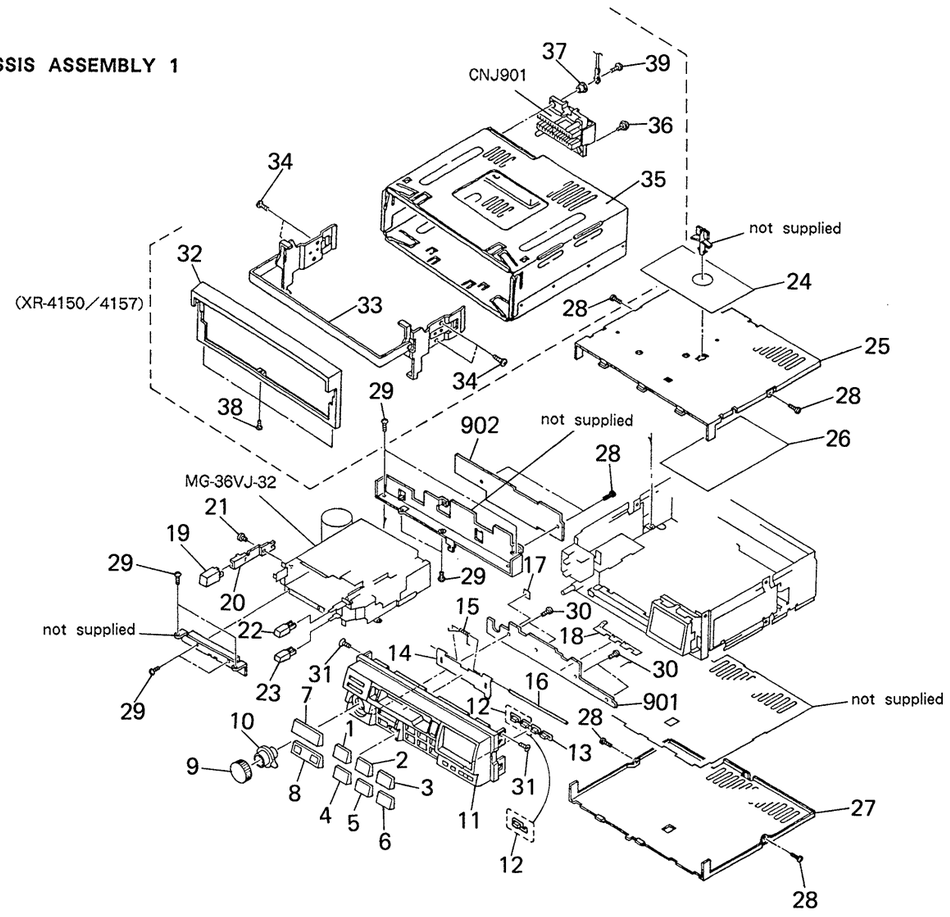


# SECTION 5
# EXPLODED VIEWS

**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

## (1) CHASSIS ASSEMBLY 1




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 1 | 3-393-024-01 | BUTTON (M;N1P)(1) | |
| 2 | 3-393-024-11 | BUTTON (M;N2P)(2) | |
| 3 | 3-393-024-21 | BUTTON (M;N3P)(3) | |
| 4 | 3-393-024-31 | BUTTON (M;N4P)(4) | |
| 5 | 3-393-024-41 | BUTTON (M;N5P)(5) | |
| 6 | 3-393-024-51 | BUTTON (M;N6P)(6) | |
| 7 | 3-348-054-01 | BUTTON (M;N1W)(FM/AM) | |
| 8 | 3-351-938-01 | BUTTON (M;S1)(SEEK) | |
| 9 | A-3235-806-A | KNOB (VOL) ASSY | |
| 10 | 3-348-079-01 | KNOB (FADER) | |
| 11 | X-3348-007-1 | (4147).....PANEL SUB ASSY, FRONT | |
| | X-3348-009-1 | (4140/4150/4157)...PANEL SUB ASSY, FRONT | |
| 12 | 3-348-058-01 | (4147).....BUTTON (M, D) | |
| | 3-348-058-11 | (4140/4150/4157)...BUTTON (M, D) | |
| 13 | 3-348-057-01 | BUTTON (-,+) | |
| 14 | A-3235-816-A | (4147).....LID ASSY, CASSETTE | |
| | A-3235-817-A | (4140).....LID ASSY, CASSETTE | |
| | A-3235-820-A | (4150;E).....LID ASSY, CASSETTE | |
| | A-3235-821-A | (4157).....LID ASSY, CASSETTE | |
| | A-3235-823-A | (4150;AEP)...LID ASSY, CASSETTE | |
| 15 | 3-348-080-01 | SPRING, TORSION | |
| 16 | 3-350-709-01 | SHAFT, CASSETTE DOOR | |
| 17 | 9-911-839-XX | PACKING, KNOB | |
| 18 | *3-348-051-01 | PLATE (A), SHIELD | |
| 19 | 3-348-073-01 | BUTTON (EJECT) | |
| 20 | *3-348-070-01 | LEVER (EJECT) | |
| 21 | 4-885-599-00 | SCREW, FITTING, REINFORCEMENT | |
| 22 | 3-348-072-01 | BUTTON (FF) | |
| 23 | 3-348-071-01 | BUTTON (REW) | |

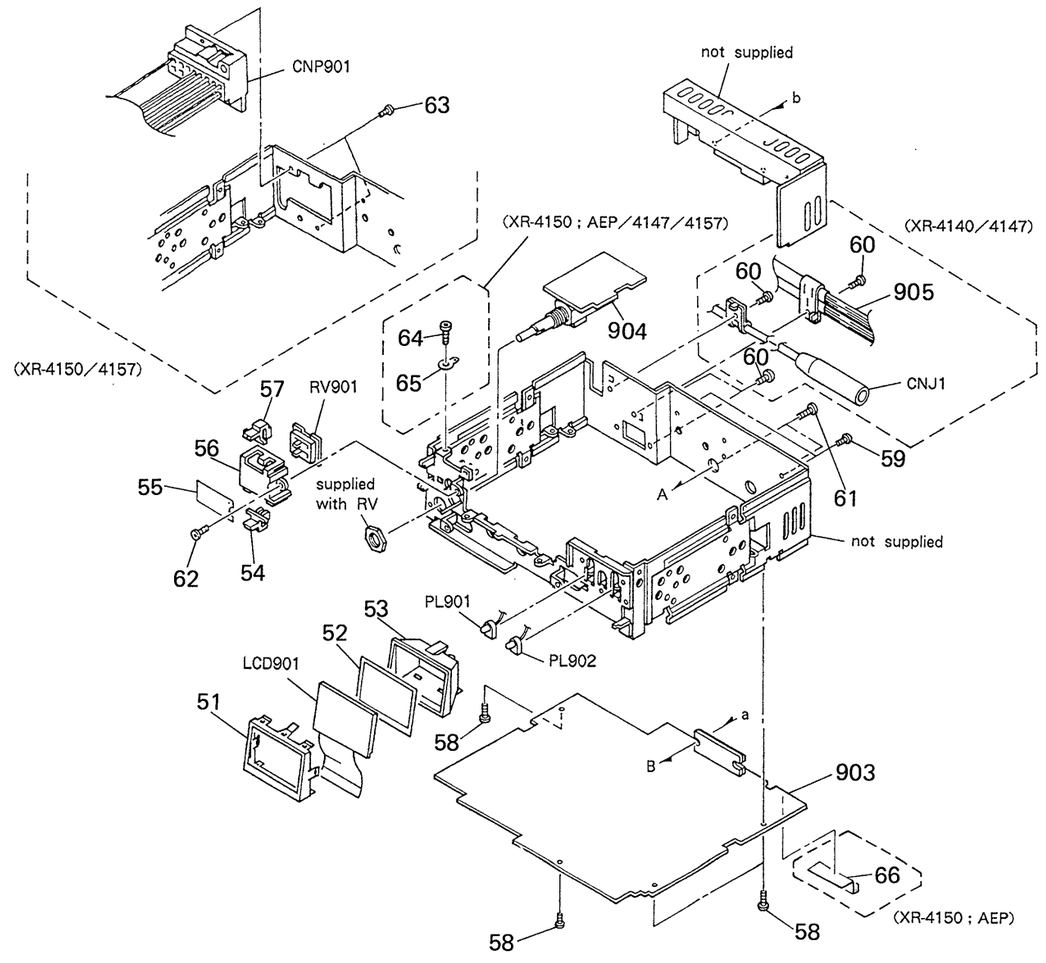
| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 24 | *3-348-089-01 | (4147;US).....LABEL, MODEL NUMBER | |
| | *3-348-090-01 | (4147;Canadian)...LABEL, MODEL NUMBER | |
| | *3-348-091-01 | (4140).....LABEL, MODEL NUMBER | |
| | *3-348-092-01 | (4157;US).....LABEL, MODEL NUMBER | |
| | *3-348-093-01 | (4157;Canadian)...LABEL, MODEL NUMBER | |
| | *3-348-094-01 | (4150;E).....LABEL, MODEL NUMBER | |
| | *3-348-095-01 | (4150;AEP).....LABEL, MODEL NUMBER | |
| 25 | *3-340-622-22 | CASE (UPPER) | |
| 26 | *3-348-035-11 | PLATE, SHIELD | |
| 27 | *3-340-623-12 | CASE (LOWER) | |
| 28 | 7-621-770-67 | SCREW +BVTT 2.6X6 (S) | |
| 29 | 7-621-773-86 | SCREW +BVTT 2.6X4 (S) | |
| 30 | 7-685-103-19 | SCREW +P 2X5 TYPE2 NON-SLIT | |
| 31 | 7-621-561-19 | +K 2.6X6 | |
| 32 | 3-340-640-21 | (4150/4157)...FRAME, ORNAMENTAL | |
| 33 | X-3348-012-1 | (4150/4157)...HANDLE ASSY | |
| 34 | 3-329-814-01 | (4150/4157)...SCREW(M4X6), SPECIAL PAN(+) | |
| 35 | *X-3348-011-1 | (4150/4157)...BRACKET ASSY | |
| 36 | 3-340-614-11 | (4150/4157)...SCREW (JACK), STEP | |
| 37 | 3-340-673-11 | (4150/4157)...COLLAR (JACK) | |
| 38 | 7-627-553-38 | (4150/4157)...SCREW, PRECISION +P 2X3 | |
| 39 | 7-682-548-04 | (4150/4157)...SCREW +B 3X8 | |
| 901 | *1-632-269-11 | PC BOARD, CONTROL | |
| 902 | *A-3270-708-A | MOUNTED PCB, MUTE, EQ | |
| CNJ901 | 1-575-328-11 | (4150;E/4157)...CORD (WITH CONNECTOR) (SOCKET) | |
| CNJ901 | 1-575-328-21 | (4150;AEP).....CORD (WITH CONNECTOR) (SOCKET) | |

**Note:**

CNJ901: Please refer to the additional information in page 30.



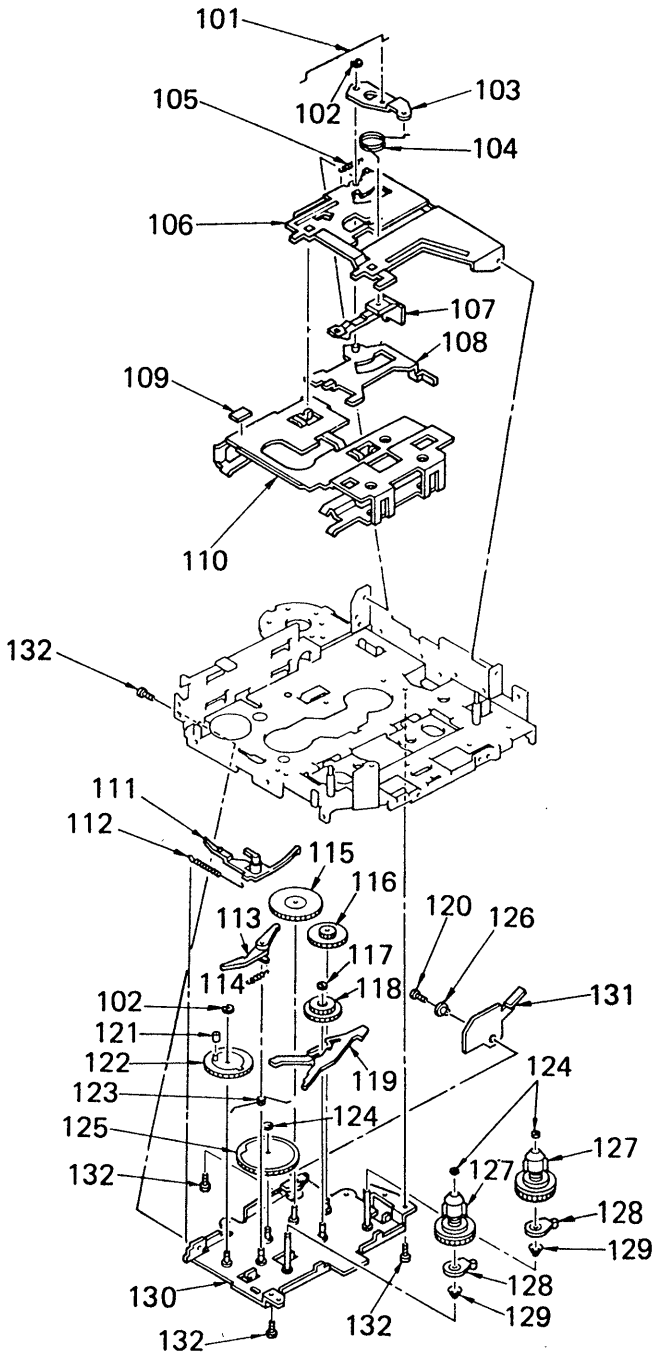
## (2) CHASSIS ASSEMBLY 2




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 51 | *3-348-018-01 | HOLDER (LCD) | |
| 52 | 3-348-003-01 | (4140/4147/4150;E/4157)..ILLUMINATOR(LCD) | |
| | 3-348-003-11 | (4150;AEP).....ILLUMINATOR(LCD) | |
| 53 | *3-348-023-01 | COVER (LAMP) | |
| 54 | 3-348-048-01 | KNOB (BASS) | |
| 55 | *3-348-050-01 | SHEET | |
| 56 | *3-348-052-01 | HOLDER (B/T) | |
| 57 | 3-348-049-01 | KNOB (TRE) | |
| 58 | 7-621-770-67 | SCREW (+PTT 2.6X8), GROUND POINT | |
| 59 | 7-685-133-19 | SCREW +P 2.6X6 TYPE2 SLIT | |
| 60 | 7-621-770-67 | (4140/4147)...SCREW +BVTT 2.6X6 (S) | |
| 61 | 7-685-646-79 | SCREW +P 3X8 TYPE2 NON-SLIT | |
| 62 | 7-621-772-18 | SCREW +B 2X4 | |
| 63 | 7-682-547-04 | (4150/4157)...SCREW +P 3X6 | |
| 64 | 7-621-255-35 | (4150;AEP/4147/4157)...SCREW +BVTT 2X5(S) | |
| 65 | 7-623-505-01 | (4150;AEP/4147/4157)...LUG, 2 | |
| 66 | *3-357-811-01 | (4150;AEP)...PLATE, GROUND | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 903 | *A-3216-995-A | (4147).....MOUNTED PCB, MAIN | |
| | *A-3216-996-A | (4140).....MOUNTED PCB, MAIN | |
| | *A-3216-997-A | (4150;AEP)...MOUNTED PCB, MAIN | |
| | *A-3216-998-A | (4157).....MOUNTED PCB, MAIN | |
| | *A-3216-999-A | (4150;E).....MOUNTED PCB, MAIN | |
| 904 | *1-632-271-11 | PC BOARD, VOL | |
| 905 | *1-575-330-11 | (4140/4147)...CORD, SPEAKER | |
| CNJ1 | 1-575-329-11 | (4140/4147)...CORD (WITH CONNECTOR)(ANT) | |
| CNP901 | 1-575-327-11 | (4150/4157)...CORD (WITH CONNECTOR)(PLUG) | |
| LCD901 | 1-808-450-11 | DISPLAY PANEL, LIQUID CRYSTAL | |
| PL901 | 1-518-661-11 | (4150;AEP).....LAMP, PILOT | |
| PL901 | 1-518-661-21 | (4140/4147/4150;E/4157)...LAMP, PILOT | |
| PL902 | 1-518-661-11 | (4150;AEP).....LAMP, PILOT | |
| PL902 | 1-518-661-21 | (4140/4147/4150;E/4157)...LAMP, PILOT | |
| RV901 | 1-238-874-11 | RES, VAR, SLIDE 50K/50K (WITH PC BOARD) | |

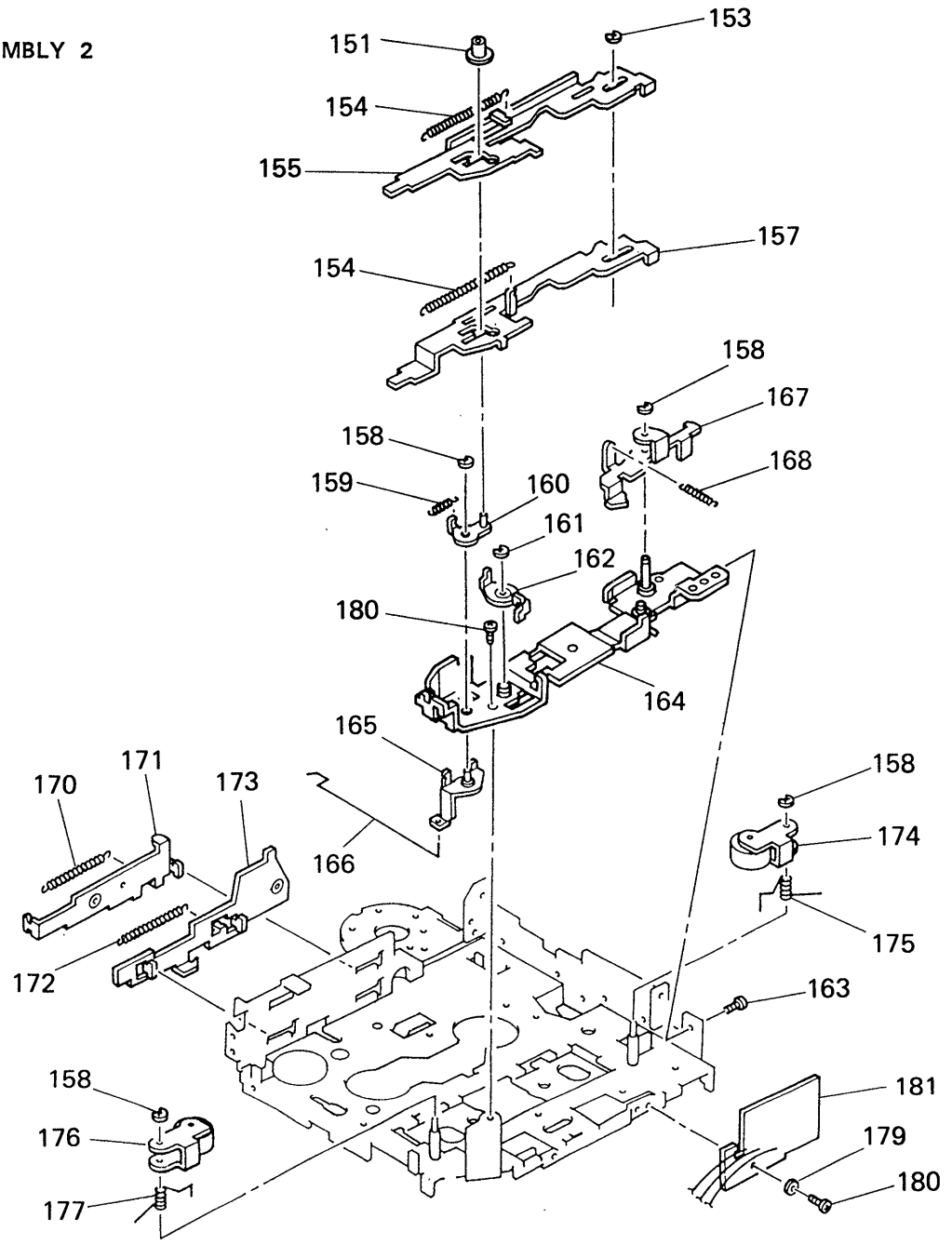
## (3) MD ASSEMBLY 1




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 101 | 3-392-969-01 | LINK, RETURN | |
| 102 | 7-624-104-04 | STOP RING 2.0, TYPE -E | |
| 103 | *3-392-932-01 | PLATE, CENTER | |
| 104 | 3-392-961-01 | SPRING (B) | |
| 105 | 3-392-953-01 | SPRING | |
| 106 | *3-392-973-01 | HANGER, CASSETTE | |
| 107 | 3-392-972-01 | HOOKER, TAPE | |
| 108 | *3-392-921-01 | LOCK ASSY, EJECT CAM | |
| 109 | *3-392-968-01 | CUSHION, C.H | |
| 110 | *3-392-977-01 | HOLDER, CASSETTE | |
| 111 | 3-392-985-02 | RATCHET | |
| 112 | 3-392-959-01 | SPRING | |
| 113 | 3-392-989-02 | ARM, GEAR LOCK | |
| 114 | 3-392-949-02 | SPRING | |
| 115 | 3-392-937-01 | GEAR (B) | |
| 116 | 3-392-936-01 | GEAR (A) | |

| No. | Part No. | Description | Remar |
|---|---|---|---|
| 117 | 3-570-615-00 | POLY-WASHER (DIA.1.2) | |
| 118 | 3-392-915-01 | GEAR, IDLE | |
| 119 | 3-392-986-01 | ARM, SENSOR | |
| 120 | 4-908-792-31 | SCREW (B2) (M2X4), TAPPING | |
| 121 | 3-392-944-01 | COLLAR (CELECTER GEAR) | |
| 122 | 3-392-987-01 | GEAR, SELECTOR | |
| 123 | 3-392-960-01 | SPRING | |
| 124 | 3-676-387-00 | POLY-SLIDER (DIA.1.6) | |
| 125 | 3-392-990-01 | GEAR, DETECTION | |
| 126 | 3-392-946-01 | COLLAR, SWITCH ARM | |
| 127 | 3-392-910-01 | SPINDLE ASSY, REEL | |
| 128 | 3-392-940-01 | CAM, DETECTION | |
| 129 | 3-392-964-01 | SPRING, TENSION | |
| 130 | *3-392-976-01 | BASE ASSY, REEL | |
| 131 | *3-392-982-01 | ARM, SWITCH | |
| 132 | *4-908-792-11 | SCREW (B2X3), TAPPING, P1 | |

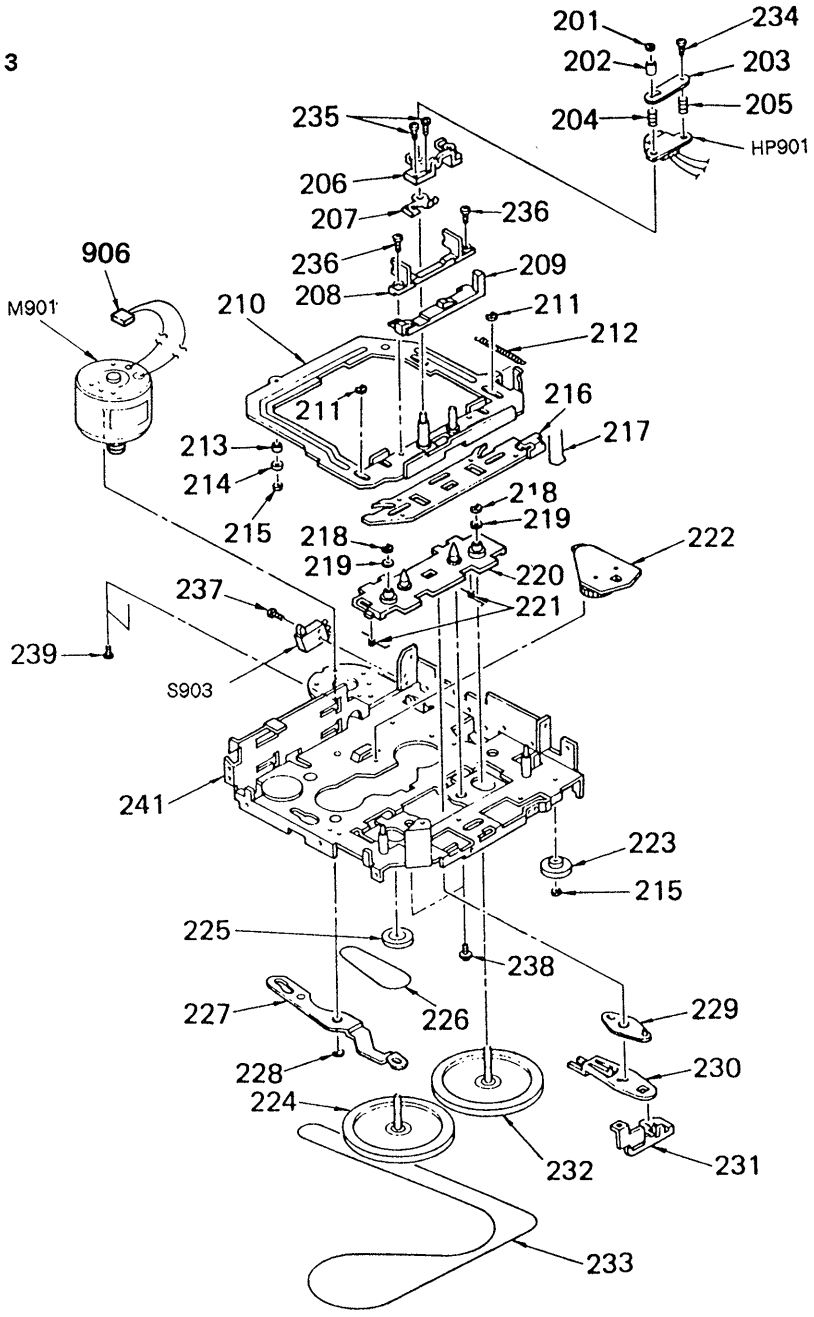
## (4) MD ASSEMBLY 2




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 151 | 3-392-994-01 | ROLLER, PROGRAM | |
| 153 | 7-624-104-04 | STOP RING 2.0, TYPE -E | |
| 154 | 3-392-948-01 | SPRING | |
| 155 | *3-392-991-01 | LEVER (Z), FF | |
| 157 | *3-392-992-01 | LEVER (Z), REW | |
| 158 | 7-624-102-04 | STOP RING 1.5, TYPE -E | |
| 159 | 3-392-954-01 | SPRING | |
| 160 | *3-392-924-01 | ARM ASSY, PROGRAM | |
| 161 | 7-624-105-04 | STOP RING 2.3, TYPE -E | |
| 162 | *3-392-933-01 | LEVER (B), CHANGE | |
| 163 | 7-621-555-10 | SCREW +K 2X3 | |
| 164 | *3-392-993-01 | BRACKET ASSY, LEVER | |
| 165 | *3-392-920-01 | LEVER (A) ASSY, CHANGE | |
| 166 | 3-392-966-01 | LINK, SELECTOR | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 167 | *3-392-935-01 | ARM, LOCK | |
| 168 | 3-392-917-01 | SPRING | |
| 170 | 3-392-950-01 | SPRING | |
| 171 | *3-392-978-01 | LEVER, EJECT | |
| 172 | 3-392-951-01 | SPRING | |
| 173 | *3-392-929-01 | CAM ASSY, EJECT | |
| 174 | *3-392-928-01 | ARM (F) ASSY, PINCH | |
| 175 | 3-392-957-01 | SPRING (F) | |
| 176 | *3-392-927-01 | ARM (R) ASSY, PINCH | |
| 177 | 3-392-958-01 | SPRING (R) | |
| 179 | 7-623-205-22 | SW 2, TYPE 2 | |
| 180 | 7-621-255-25 | SCREW +PTT 2X4 (S) | |
| 181 | 3-392-970-01 | CHASSIS, SWITCH | |

## (5) MD ASSEMBLY 3




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 201 | 3-676-387-00 | POLY-SLIDER (DIA.1.6) | |
| 202 | 3-392-943-01 | ROLLER, FF | |
| 203 | *3-392-930-01 | RETAINER, SPRING | |
| 204 | 3-392-956-01 | SPRING (A) | |
| 205 | 3-392-955-01 | SPRING (A) | |
| 206 | 3-392-988-01 | ARM, ADJUSTOR | |
| 207 | 3-392-931-01 | SEAM, ADJUSTOR | |
| 208 | 3-392-984-01 | GUIDE, TAPE | |
| 209 | 3-392-971-01 | LINK, ADJUSTOR | |
| 210 | *3-392-975-02 | PLATE ASSY, HEAD | |
| 211 | 7-624-105-04 | STOP RING 2.3, TYPE -E | |
| 212 | 3-392-952-01 | SPRING | |
| 213 | 3-392-942-01 | ROLLER (B), H.P | |
| 214 | 3-392-945-01 | ROLLER (A), H.P | |
| 215 | 3-570-615-00 | POLY-WASHER (DIA.1.2) | |
| 216 | *3-392-919-01 | ARM ASSY, F,R SELECTION | |
| 217 | 3-392-962-01 | SPRING | |
| 218 | 3-590-768-00 | RING (A), E | |
| 219 | 3-701-437-11 | POLY-SLIDER (A) | |
| 220 | 3-392-914-01 | BRACKET ASSY, CM | |
| 221 | 3-392-963-01 | SPRING (R) | |
| 222 | 3-392-916-01 | ARM ASSY, TU GEAR | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 223 | 3-392-941-01 | PULLEY (A), IDLE | |
| 224 | 3-392-995-02 | FLYWHEEL ASSY (R) | |
| 225 | 3-392-938-01 | GEAR, PULLY | |
| 226 | 3-392-965-01 | BELT (B), SUB | |
| 227 | *3-392-979-01 | LEVER, REVERSE | |
| 228 | 7-624-104-04 | STOP RING 2.0, TYPE -E | |
| 229 | *3-392-925-01 | ARM (A) ASSY, F.R | |
| 230 | *3-392-939-01 | ARM, FF | |
| 231 | *3-392-934-01 | ARM (B), F.R | |
| 232 | 3-392-926-02 | FLYWHEEL ASSY | |
| 233 | 3-392-967-01 | BELT, MAIN | |
| 234 | 7-627-553-48 | SCREW, PRECISION +P 2X4 | |
| 235 | 3-392-909-01 | SCREW, AZIMUTH ADJUSTMENT | |
| 236 | 7-627-553-88 | SCREW, PRECISION +P 2X7 | |
| 237 | 3-318-203-11 | SCREW (B1.7X6), TAPPING | |
| 238 | 3-392-918-01 | SCREW, EJECT HOOK | |
| 239 | 7-627-554-07 | PRECISION SCREW +P 2X2.2 TYPE3 | |
| 241 | *3-392-974-01 | CHASSIS ASSY, MAIN | |
| 906 | *3-392-901-01 | CONNECTOR ASSY (2P) | |
| HP901 | 1-543-717-11 | HEAD, MAGNETIC (PLAYBACK) | |
| M901 | 3-392-908-02 | MOTOR ASSY | |
| S903 | 1-554-790-11 | SWITCH, POWER (TAPE/RADIO) | |

# SECTION 6
# ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

| Ref.No. | Part No. | Description |
|---|---|---|
| 901 | *1-632-269-11 | PC BOARD, CONTROL |
| 902 | *A-3270-708-A | MOUNTED PCB, MUTE, EQ |
| 903 | *A-3216-995-A | (4147).....MOUNTED PCB, MAIN |
| | *A-3216-996-A | (4140).....MOUNTED PCB, MAIN |
| | *A-3216-997-A | (4150;AEP)...MOUNTED PCB, MAIN |
| | *A-3216-998-A | (4157).....MOUNTED PCB, MAIN |
| | *A-3216-999-A | (4150;E).....MOUNTED PCB, MAIN |
| 904 | *1-632-271-11 | PC BOARD, VOL |
| 905 | *1-575-330-11 | (4140/4147)...CORD, SPEAKER |
| 906 | *3-392-901-01 | CONNECTOR ASSY (2P) |
| BT701 | 1-528-225-31 | (4150/4157)...BATTERY, LITHIUM |
| C1 | 1-163-161-00 | CERAMIC CHIP 15PF 5% 50V |
| C2 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C3 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C4 | 1-124-589-11 | ELECT 47MF 20% 10V |
| C5 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C6 | 1-163-809-11 | CERAMIC CHIP 0.047MF 10% 25V |
| C7 | 1-124-438-00 | ELECT 1MF 20% 50V |
| C8 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C9 | 1-124-465-00 | ELECT 0.47MF 20% 50V |
| C10 | 1-163-169-00 | CERAMIC CHIP 33PF 5% 50V |
| C11 | 1-126-094-11 | ELECT 4.7MF 20% 25V |
| C12 | 1-124-256-00 | (4140/4147/4157) ...ELECT 1.5MF 20% 50V |
| C12 | 1-131-587-11 | (4150)...TANTALUM 0.68MF 10% 35V |
| C13 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C14 | 1-124-229-00 | ELECT 33MF 20% 10V |
| C15 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C16 | 1-163-213-00 | CERAMIC CHIP 0.0022MF 10% 50V |
| C17 | 1-124-234-00 | ELECT 22MF 20% 16V |
| C18 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C19 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C20 | 1-124-589-11 | ELECT 47MF 20% 10V |
| C21 | 1-163-053-00 | CERAMIC CHIP 0.0033MF 10% 50V |
| C22 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C23 | 1-163-209-00 | CERAMIC CHIP 0.0015MF 10% 50V |
| C24 | 1-126-094-11 | ELECT 4.7MF 20% 25V |
| C27 | 1-163-062-00 | (4140/4150) ...CERAMIC CHIP 0.018MF 10% 50V |
| C27 | 1-163-063-00 | (4147/4157) ...CERAMIC CHIP 0.022MF 10% 50V |
| C28 | 1-163-062-00 | (4140/4150) ...CERAMIC CHIP 0.018MF 10% 50V |
| C28 | 1-163-063-00 | (4147/4157) ...CERAMIC CHIP 0.022MF 10% 50V |

| Ref.No. | Part No. | Description |
|---|---|---|
| C29 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C30 | 1-124-464-11 | ELECT 0.22MF 20% 50V |
| C31 | 1-124-438-00 | ELECT 1MF 20% 50V |
| C32 | 1-124-229-00 | ELECT 33MF 20% 10V |
| C33 | 1-124-438-00 | ELECT 1MF 20% 50V |
| C34 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C50 | 1-131-342-00 | (4150)...TANTALUM 0.15MF 10% 35V |
| C99 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C101 | 1-126-162-11 | ELECT 3.3MF 20% 35V |
| C102 | 1-126-162-11 | ELECT 3.3MF 20% 35V |
| C103 | 1-126-094-11 | ELECT 4.7MF 20% 25V |
| C104 | 1-163-157-00 | CERAMIC CHIP 10PF 5% 50V |
| C105 | 1-126-094-11 | ELECT 4.7MF 20% 25V |
| C121 | 1-126-162-11 | ELECT 3.3MF 20% 35V |
| C122 | 1-163-199-00 | CERAMIC CHIP 560PF 10% 50V |
| C123 | 1-124-963-11 | ELECT 33MF 20% 10V |
| C124 | 1-130-773-11 | FILM 0.27MF 10% 63V |
| C125 | 1-130-773-11 | FILM 0.27MF 10% 63V |
| C201 | 1-126-162-11 | ELECT 3.3MF 20% 35V |
| C202 | 1-126-162-11 | ELECT 3.3MF 20% 35V |
| C203 | 1-126-094-11 | ELECT 4.7MF 20% 25V |
| C204 | 1-163-157-00 | CERAMIC CHIP 10PF 5% 50V |
| C205 | 1-126-094-11 | ELECT 4.7MF 20% 25V |
| C221 | 1-126-162-11 | ELECT 3.3MF 20% 35V |
| C222 | 1-163-199-00 | CERAMIC CHIP 560PF 10% 50V |
| C223 | 1-124-963-11 | ELECT 33MF 20% 10V |
| C224 | 1-130-773-11 | FILM 0.27MF 10% 63V |
| C225 | 1-130-773-11 | FILM 0.27MF 10% 63V |
| C301 | 1-124-229-00 | ELECT 33MF 20% 10V |
| C321 | 1-124-589-11 | ELECT 47MF 20% 16V |
| C322 | 1-124-443-00 | ELECT 100MF 20% 10V |
| C323 | 1-123-306-00 | ELECT 47MF 20% 10V |
| C326 | 1-124-893-11 | ELECT 2200MF 20% 10V |
| C352 | 1-124-229-00 | ELECT 33MF 20% 10V |
| C353 | 1-124-589-11 | ELECT 47MF 20% 10V |
| C354 | 1-124-229-00 | ELECT 33MF 20% 10V |
| C356 | 1-124-556-11 | ELECT 2200MF 20% 16V |
| C357 | 1-126-101-11 | ELECT 100MF 20% 16V |
| C361 | 1-161-051-00 | CERAMIC 0.01MF 10% 25V |
| C365 | 1-163-181-00 | CERAMIC CHIP 100PF 5% 50V |
| C370 | 1-163-059-00 | (4150;AEP)..CERAMIC CHIP 0.01MF 10% 50V |
| C371 | 1-163-181-00 | (4150;AEP)..CERAMIC CHIP 100PF 5% 50V |
| C372 | 1-163-059-00 | (4150;AEP)..CERAMIC CHIP 0.01MF 10% 50V |
| C373 | 1-163-063-00 | (4150;AEP) ...CERAMIC CHIP 0.022MF 10% 50V |
| C374 | 1-163-059-00 | (4150;AEP)..CERAMIC CHIP 0.01MF 10% 50V |

| Ref.No. | Part No. | Description |
|---|---|---|
| C375 | 1-126-567-11 | ELECT 4.7MF 20% 25V |
| C376 | 1-163-059-00 | (4150;AEP)..CERAMIC CHIP 0.01MF 10% 50V |
| C377 | 1-163-059-00 | (4150;AEP)..CERAMIC CHIP 0.01MF 10% 50V |
| C378 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C401 | 1-126-160-11 | ELECT 1MF 20% 50V |
| C402 | 1-163-205-00 | CERAMIC CHIP 0.001MF 10% 50V |
| C403 | 1-126-154-11 | ELECT 47MF 20% 6.3V |
| C404 | 1-130-485-00 | MYLAR 0.015MF 5% 50V |
| C405 | 1-163-185-00 | CERAMIC CHIP 150PF 5% 50V |
| C421 | 1-126-160-11 | ELECT 1MF 20% 50V |
| C422 | 1-163-205-00 | CERAMIC CHIP 0.001MF 10% 50V |
| C423 | 1-126-154-11 | ELECT 47MF 20% 6.3V |
| C424 | 1-130-485-00 | MYLAR 0.015MF 5% 50V |
| C425 | 1-163-185-00 | CERAMIC CHIP 150PF 5% 50V |
| C451 | 1-124-589-11 | ELECT 47MF 20% 10V |
| C452 | 1-124-589-11 | ELECT 47MF 20% 10V |
| C453 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C454 | 1-124-119-00 | ELECT 330MF 20% 16V |
| C455 | 1-126-096-11 | ELECT 10MF 20% 25V |
| C456 | 1-124-589-11 | ELECT 47MF 20% 16V |
| C457 | 1-126-157-11 | ELECT 10MF 20% 16V |
| C501 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C502 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C503 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C504 | 1-124-446-11 | ELECT 47MF 20% 10V |
| C505 | 1-124-257-00 | ELECT 2.2MF 20% 50V |
| C506 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C507 | 1-124-229-00 | ELECT 33MF 20% 10V |
| C508 | 1-163-075-00 | CERAMIC CHIP 0.047MF 10% 25V |
| C509 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C510 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C511 | 1-124-446-11 | ELECT 47MF 20% 10V |
| C512 | 1-124-438-00 | ELECT 1MF 20% 50V |
| C513 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C514 | 1-126-159-11 | ELECT 0.47MF 20% 50V |
| C515 | 1-163-075-00 | CERAMIC CHIP 0.047MF 10% 25V |
| C516 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C517 | 1-124-465-00 | ELECT 0.47MF 20% 50V |
| C518 | 1-126-162-11 | ELECT 3.3MF 20% 35V |
| C519 | 1-126-094-11 | ELECT 4.7MF 20% 25V |
| C520 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C521 | 1-136-736-00 | FILM 430PF 5% 50V |
| C522 | 1-161-055-00 | CERAMIC 0.022MF 10% 25V |
| C523 | 1-161-020-11 | CERAMIC 0.039MF 10% 25V |
| C525 | 1-124-463-00 | ELECT 0.1MF 20% 50V |
| C526 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C528 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C529 | 1-163-158-00 | (4140/4147/4150;E/4157) ...CERAMIC CHIP 11PF 5% 50V |
| C529 | 1-163-160-00 | (4150;AEP)..CERAMIC CHIP 13PF 5% 50V |
| C530 | 1-163-153-00 | (4147/4157) ...CERAMIC CHIP 6PF 0.25PF 50V |
| C530 | 1-163-156-00 | (4140/4150) ...CERAMIC CHIP 9PF 0.25PF 50V |
| C531 | 1-163-153-00 | (4147/4157) ...CERAMIC CHIP 6PF 0.25PF 50V |
| C531 | 1-163-156-00 | (4140/4150) ...CERAMIC CHIP 9PF 0.25PF 50V |

| Ref.No. | Part No. | Description |
|---|---|---|
| C535 | 1-163-173-00 | (4147/4150;AEP/4157) ...CERAMIC CHIP 47PF 5% 50V |
| C536 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% 50V |
| C601 | 1-130-479-00 | MYLAR 0.0047MF 5% 50V |
| C602 | 1-130-486-00 | MYLAR 0.018MF 5% 50V |
| C603 | 1-130-489-00 | MYLAR 0.033MF 5% 50V |
| C604 | 1-124-250-00 | ELECT 0.15MF 20% 50V |
| C605 | 1-163-205-00 | (4147/4150;AEP/4157) ...CERAMIC CHIP 0.001MF 5% 50V |
| C606 | 1-163-205-00 | (4147/4150;AEP/4157) ...CERAMIC CHIP 0.001MF 5% 50V |
| C621 | 1-130-479-00 | MYLAR 0.0047MF 5% 50V |
| C622 | 1-130-486-00 | MYLAR 0.018MF 5% 50V |
| C623 | 1-130-489-00 | MYLAR 0.033MF 5% 50V |
| C624 | 1-124-250-00 | ELECT 0.15MF 20% 50V |
| C625 | 1-163-205-00 | (4147/4150;AEP/4157) ...CERAMIC CHIP 0.001MF 5% 50V |
| C626 | 1-163-205-00 | (4147/4150;AEP/4157) ...CERAMIC CHIP 0.001MF 5% 50V |
| C701 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C702 | 1-163-165-00 | CERAMIC CHIP 22PF 5% 50V |
| C703 | 1-163-164-00 | CERAMIC CHIP 20PF 5% 50V |
| C704 | 1-124-463-00 | ELECT 0.1MF 20% 50V |
| C705 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C706 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C707 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C708 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C709 | 1-126-094-11 | ELECT 4.7MF 20% 25V |
| C710 | 1-126-094-11 | ELECT 4.7MF 20% 25V |
| C711 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C712 | 1-124-589-11 | ELECT 47MF 20% 10V |
| C713 | 1-163-063-00 | CERAMIC CHIP 0.022MF 10% 50V |
| C714 | 1-163-059-00 | CERAMIC CHIP 0.01MF 10% 50V |
| C715 | 1-124-225-00 | ELECT 100MF 20% 6.3V |
| C716 | 1-124-135-00 | ELECT 470MF 20% 6.3V |
| C901 | 1-161-055-00 | CAP, CERAMIC 0.022MF X |
| C902 | 1-161-494-00 | (4147/4150;AEP/4157) ...CERAMIC 0.022MF 25V |
| CF1 | 1-567-107-11 | (4150).....FILTER, CERAMIC |
| CF1 | 1-567-415-11 | (4140/4147/4157)....FILTER, CERAMIC |
| CF501 | 1-567-309-11 | FILTER, CERAMIC |
| CF502 | 1-527-981-00 | FILTER, CERAMIC |
| CNJ1 | 1-575-329-11 | (4140/4147)..CORD(WITH CONNECTOR)(ANT) |
| CNJ901 | 1-575-328-11 | (4150;E/4157)...CORD (WITH CONNECTOR) (SOCKET) |
| CNJ901 | 1-575-328-21 | (4150;AEP).....CORD (WITH CONNECTOR) (SOCKET) |
| CNP1 | *1-506-984-11 | PIN, CONNECTOR (PC BOARD) 2P |
| CNP2 | *1-506-985-11 | PIN, CONNECTOR (PC BOARD) 3P |
| CNP3 | *1-506-496-11 | PIN, CONNECTOR 3P |
| CNP4 | *1-506-986-11 | PIN, CONNECTOR (PC BOARD) 4P |
| CNP5 | *1-506-987-11 | PIN, CONNECTOR (PC BOARD) 5P |
| CNP6 | *1-566-006-11 | PIN, CONNECTOR (PC BOARD) 9P |
| CNP7 | *1-506-757-11 | PIN, CONNECTOR 10P |
| CNP8 | *1-564-242-00 | PIN, CONNECTOR 5P |
| CNP9 | *1-564-517-11 | PLUG, CONNECTOR 2P |
| CNP10 | *1-506-984-11 | PIN, CONNECTOR (PC BOARD) 2P |
| CNP11 | *1-506-984-11 | PIN, CONNECTOR (PC BOARD) 2P |
| CNP12 | *1-566-003-11 | PIN, CONNECTOR (PC BOARD) 6P |

• The following is a fuse parts list which is consisting in the power cord(CNJ901).

| Description | Part No. | MODEL |
|---|---|---|
| FUSE (1A) | 1-532-360-XX | XR-4140/4147/4157, XR-4150 (E model) |
| FUSE (5A) | 1-532-421-00 | |
| FUSE, GLASS TUBE (1A) | 1-532-452-XX | XR-4150 (AEP model) |
| FUSE, GLASS TUBE (5A) | 1-532-747-11 | |

| Ref.No. | Part No. | Description |
|---|---|---|
| CNP13 | *1-566-003-11 | PIN, CONNECTOR (PC BOARD) 6P |
| CNP14 | *1-564-509-11 | (4150/4157)...PLUG, CONNECTOR 6P |
| CNP15 | 1-564-320-00 | (4140/4147)...PIN, CONNECTOR 2P |
| CNP16 | *1-506-496-11 | (4140/4147)...PIN, CONNECTOR 3P |
| CNP851 | *1-569-216-11 | (4140/4147)...CONNECTOR |
| CNP901 | 1-575-327-11 | (4150/4157)...CORD (WITH CONNECTOR) |
| CNS701 | *1-563-373-11 | SOCKET, CONNECTOR 25P |
| D1 | 8-719-911-19 | DIODE 1SS119 |
| D2 | 8-719-911-19 | DIODE 1SS119 |
| D3 | 8-719-911-19 | DIODE 1SS119 |
| D4 | 8-719-911-19 | DIODE 1SS119 |
| D5 | 8-719-911-19 | DIODE 1SS119 |
| D301 | 8-719-110-08 | DIODE RD8.2ES-B2 |
| D321 | 8-719-911-19 | DIODE 1SS119 |
| D322 | 8-719-911-19 | DIODE 1SS119 |
| D351 | 8-719-911-19 | DIODE 1SS119 |
| D352 | 8-719-110-13 | DIODE RD9.1ES-B2 |
| D353 | 8-719-110-17 | DIODE RD10ES-B2 |
| D354 | 8-719-911-19 | DIODE 1SS119 |
| D355 | 8-719-911-19 | DIODE 1SS119 |
| D356 | 8-719-911-19 | DIODE 1SS119 |
| D357 | 8-719-109-89 | DIODE RD5.6ES-B2 |
| D358 | 8-719-945-59 | DIODE DSA3A4 |
| D359 | 8-719-200-82 | DIODE 11ES2 |
| D360 | 8-719-200-82 | (4150/4157)...DIODE 11ES2 |
| D361 | 8-719-200-82 | DIODE 11ES2 |
| D401 | 8-719-911-19 | DIODE 1SS119 |
| D421 | 8-719-911-19 | DIODE 1SS119 |
| D451 | 8-719-110-13 | DIODE RD9.1ES-B2 |
| D452 | 8-719-911-19 | DIODE 1SS119 |
| D453 | 8-719-911-19 | DIODE 1SS119 |
| D454 | 8-719-110-13 | DIODE RD9.1ES-B2 |
| D455 | 8-719-911-19 | DIODE 1SS119 |
| D456 | 8-719-911-19 | DIODE 1SS119 |
| D457 | 8-719-911-19 | DIODE 1SS119 |
| D458 | 8-719-911-19 | DIODE 1SS119 |
| D501 | 8-719-110-46 | DIODE RD16ES-B2 |
| D502 | 8-719-110-46 | DIODE RD16ES-B2 |
| D504 | 8-719-903-25 | DIODE SVC321SP-C3 |
| D505 | 8-719-903-25 | DIODE SVC321SP-C3 |
| D506 | 8-719-903-25 | DIODE SVC321SP-C3 |
| D507 | 8-719-911-19 | DIODE 1SS119 |
| D508 | 8-719-911-19 | DIODE 1SS119 |
| D509 | 8-719-911-19 | DIODE 1SS119 |
| D701 | 8-719-911-19 | DIODE 1SS119 |
| D702 | 8-719-911-19 | DIODE 1SS119 |
| D703 | 8-719-911-19 | DIODE 1SS119 |
| D704 | 8-719-911-19 | DIODE 1SS119 |
| D705 | 8-719-911-19 | DIODE 1SS119 |
| D706 | 8-719-911-19 | DIODE 1SS119 |
| D707 | 8-719-911-19 | DIODE 1SS119 |
| D708 | 8-719-911-19 | DIODE 1SS119 |
| D709 | 8-719-911-19 | DIODE 1SS119 |
| D710 | 8-719-911-19 | (4140/4147)...DIODE 1SS119 |
| D711 | 8-719-911-19 | (4140/4150)...DIODE 1SS119 |
| D712 | 8-719-911-19 | (4140/4147/4150;E/4157)...DIODE 1SS119 |
| D713 | 8-719-911-19 | (4140/4147/4150;E/4157)...DIODE 1SS119 |
| D714 | 8-719-109-93 | DIODE RD6.2ES-B2 |
| D715 | 8-719-200-82 | DIODE 11ES2 |
| D717 | 8-719-108-26 | (4150/4157)...DIODE 1SS101 |
| D718A | 8-719-911-19 | (4150/4157)...DIODE 1SS119 |
| D718B | 8-719-109-93 | DIODE RD6.2ES-B2 |
| D801 | 8-719-951-39 | DIODE CL-50Y-CD |
| D802 | 8-719-951-39 | DIODE CL-50Y-CD |
| D803 | 8-719-951-39 | DIODE CL-50Y-CD |
| D804 | 8-719-951-39 | DIODE CL-50Y-CD |
| D805 | 8-719-951-39 | DIODE CL-50Y-CD |
| D806 | 8-719-951-39 | DIODE CL-50Y-CD |
| D807 | 8-719-951-39 | DIODE CL-50Y-CD |
| D808 | 8-719-951-39 | DIODE CL-50Y-CD |
| D809 | 8-719-951-39 | DIODE CL-50Y-CD |
| D810 | 8-719-951-39 | DIODE CL-50Y-CD |
| D811 | 8-719-951-39 | DIODE CL-50Y-CD |
| D812 | 8-719-951-39 | DIODE CL-50Y-CD |
| D813 | 8-719-951-39 | DIODE CL-50Y-CD |
| D814 | 8-719-951-39 | (4147)...DIODE CL-50Y-CD |
| D815 | 8-719-951-39 | DIODE CL-50Y-CD |
| D816 | 8-719-951-39 | DIODE CL-50Y-CD |
| D817 | 1-807-927-11 | (4140/4147/4150;E/4157)...DIODE AA3822K |
| D817 | 8-719-946-41 | (4150;AEP)...DIODE BG3822K-104 |
| D818 | 1-807-927-11 | (4140/4147/4150;E/4157)...DIODE AA3822K |
| D818 | 8-719-946-41 | (4150;AEP)...DIODE BG3822K-104 |
| D819 | 1-807-927-11 | (4140/4147/4150;E/4157)...DIODE AA3822K |
| D819 | 8-719-946-41 | (4150;AEP)...DIODE BG3822K-104 |
| FE1 | 1-465-043-11 | FRONT END, FM |
| HP901 | 1-543-717-11 | HEAD, MAGNETIC (PLAYBACK) |
| IC1 | 8-759-820-06 | IC LA1145 |
| IC2 | 8-759-801-94 | IC LA2113 |
| IC3 | 8-759-803-51 | IC LA3433 |
| IC301 | 8-759-945-58 | IC RC4558P |
| IC302 | 8-759-230-61 | IC TA8205AH |
| IC401 | 8-759-105-60 | IC UPC1228HA |
| IC501 | 8-759-822-24 | IC LA1137 |
| IC701 | 8-759-147-14 | (4147).....IC UPD1708AG-826-00 |
| IC701 | 8-759-145-91 | (4140/4150/4157)...IC UPD1708AG-821-00 |
| JR2 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JR3 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JR4 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JR5 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JR6 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JR8 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JR9 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| JR10 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W |
| L1 | 1-410-316-11 | INDUCTOR 1UH |
| L2 | 1-410-312-11 | INDUCTOR 0.22UH |
| L353 | 1-410-397-21 | (4147/4150;AEP/4157) ...FERRITE BEAD INDUCTOR |
| L354 | 1-424-331-11 | COIL, CHOKE 800UH |
| L355 | 1-410-396-41 | (4150;AEP)...INDUCTOR 0.47UH |
| L451 | 1-408-121-00 | INDUCTOR 22UH |

| Ref.No. | Part No. | Description |
|---|---|---|
| L501 | 1-410-324-11 | INDUCTOR 4.7UH |
| L502 | 1-410-513-11 | INDUCTOR 22UH |
| L503 | 1-402-149-11 | COIL, MW ANT |
| L507 | 1-408-418-00 | INDUCTOR 56UH |
| L508 | 1-410-513-11 | INDUCTOR 22UH |
| LCD901 | 1-808-450-11 | DISPLAY PANEL, LIQUID CRYSTAL |
| M901 | 3-392-908-02 | MOTOR ASSY |
| PL901 | 1-518-661-11 | (4150;AEP).....LAMP, PILOT |
| PL901 | 1-518-661-21 | (4140/4147/4150;E/4157)...LAMP, PILOT |
| PL902 | 1-518-661-11 | (4150;AEP).....LAMP, PILOT |
| PL902 | 1-518-661-21 | (4140/4147/4150;E/4157)...LAMP, PILOT |
| Q2 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q101 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q102 | 8-729-104-14 | TRANSISTOR 2SD1021 |
| Q201 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q202 | 8-729-104-14 | TRANSISTOR 2SD1021 |
| Q351 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q352 | 8-729-205-02 | TRANSISTOR 2SA1150 |
| Q353 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q354 | 8-729-807-12 | TRANSISTOR 2SD1802 |
| Q357 | 8-729-102-04 | TRANSISTOR 2SD1020-F |
| Q358 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q359 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q451 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q501 | 8-729-884-02 | TRANSISTOR 2SC2840-D |
| Q502 | 8-729-884-02 | TRANSISTOR 2SC2840-D |
| Q503 | 8-729-105-73 | TRANSISTOR 2SK523-L2 |
| Q701 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q702 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q703 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q704 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q705 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q706 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q707 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q708 | 8-729-100-12 | TRANSISTOR 2SC2001-L |
| R1 | 1-216-154-00 | METAL GLAZE 15 5% 1/8W |
| R2 | 1-216-216-00 | METAL GLAZE 5.6K 5% 1/8W |
| R3 | 1-216-144-00 | METAL GLAZE 5.6 5% 1/8W |
| R4 | 1-216-037-00 | METAL GLAZE 330 5% 1/10W |
| R5 | 1-216-232-00 | METAL GLAZE 27K 5% 1/8W |
| R6 | 1-216-101-00 | METAL GLAZE 150K 5% 1/10W |
| R7 | 1-216-228-00 | METAL GLAZE 18K 5% 1/8W |
| R8 | 1-216-226-00 | METAL GLAZE 15K 5% 1/8W |
| R9 | 1-216-222-00 | METAL GLAZE 10K 5% 1/8W |
| R10 | 1-216-216-00 | METAL GLAZE 5.6K 5% 1/8W |
| R11 | 1-216-093-00 | METAL GLAZE 68K 5% 1/10W |
| R12 | 1-216-224-00 | (4140/4147/4157) ...METAL GLAZE 12K 5% 1/8W |
| R12 | 1-216-232-00 | (4150)...METAL GLAZE 27K 5% 1/8W |
| R13 | 1-216-222-00 | METAL GLAZE 10K 5% 1/8W |
| R15 | 1-216-150-00 | METAL GLAZE 10 5% 1/8W |
| R16 | 1-216-217-00 | METAL GLAZE 6.2K 5% 1/8W |
| R17 | 1-216-238-00 | METAL GLAZE 47K 5% 1/8W |
| R18 | 1-216-216-00 | METAL GLAZE 5.6K 5% 1/8W |
| R19 | 1-216-150-00 | METAL GLAZE 10 5% 1/8W |

| Ref.No. | Part No. | Description |
|---|---|---|
| R20 | 1-216-103-00 | METAL GLAZE 180K 5% 1/10W |
| R21 | 1-216-101-00 | METAL GLAZE 150K 5% 1/10W |
| R22 | 1-216-234-00 | METAL GLAZE 33K 5% 1/8W |
| R28 | 1-216-231-00 | METAL GLAZE 24K 5% 1/8W |
| R29 | 1-216-206-00 | METAL GLAZE 2.2K 5% 1/8W |
| R30 | 1-216-240-00 | METAL GLAZE 56K 5% 1/8W |
| R31 | 1-216-243-00 | METAL GLAZE 75K 5% 1/8W |
| R32 | 1-216-228-00 | METAL GLAZE 18K 5% 1/8W |
| R33 | 1-216-228-00 | METAL GLAZE 18K 5% 1/8W |
| R34 | 1-216-210-00 | METAL GLAZE 3.3K 5% 1/8W |
| R35 | 1-216-228-00 | METAL GLAZE 18K 5% 1/8W |
| R36 | 1-216-210-00 | METAL GLAZE 3.3K 5% 1/8W |
| R37 | 1-216-215-00 | METAL GLAZE 5.1K 5% 1/8W |
| R38 | 1-216-150-00 | METAL GLAZE 10 5% 1/8W |
| R39 | 1-216-204-00 | METAL GLAZE 1.8K 5% 1/8W |
| R40 | 1-216-228-00 | METAL GLAZE 18K 5% 1/8W |
| R41 | 1-216-208-00 | METAL GLAZE 2.7K 5% 1/8W |
| R101 | 1-216-230-00 | METAL GLAZE 22K 5% 1/8W |
| R102 | 1-216-214-00 | METAL GLAZE 4.7K 5% 1/8W |
| R103 | 1-216-234-00 | METAL GLAZE 33K 5% 1/8W |
| R104 | 1-216-244-00 | METAL GLAZE 82K 5% 1/8W |
| R105 | 1-216-246-00 | METAL GLAZE 100K 5% 1/8W |
| R106 | 1-216-224-00 | METAL GLAZE 12K 5% 1/8W |
| R107 | 1-216-246-00 | METAL GLAZE 100K 5% 1/8W |
| R108 | 1-216-204-00 | METAL GLAZE 1.8K 5% 1/8W |
| R109 | 1-216-234-00 | METAL GLAZE 33K 5% 1/8W |
| R110 | 1-216-246-00 | METAL GLAZE 100K 5% 1/8W |
| R121 | 1-216-204-00 | METAL GLAZE 1.8K 5% 1/8W |
| R122 | 1-247-774-00 | CARBON MELF 4.3 5% 1/5W |
| R123 | 1-247-774-00 | CARBON MELF 4.3 5% 1/5W |
| R124 | 1-247-774-00 | CARBON MELF 4.3 5% 1/5W |
| R125 | 1-247-774-00 | CARBON MELF 4.3 5% 1/5W |
| R126 | 1-216-176-00 | METAL GLAZE 120 5% 1/8W |
| R201 | 1-216-230-00 | METAL GLAZE 22K 5% 1/8W |
| R202 | 1-216-214-00 | METAL GLAZE 4.7K 5% 1/8W |
| R203 | 1-216-234-00 | METAL GLAZE 33K 5% 1/8W |
| R204 | 1-216-244-00 | METAL GLAZE 82K 5% 1/8W |
| R205 | 1-216-246-00 | METAL GLAZE 100K 5% 1/8W |
| R206 | 1-216-224-00 | METAL GLAZE 12K 5% 1/8W |
| R207 | 1-216-246-00 | METAL GLAZE 100K 5% 1/8W |
| R208 | 1-216-204-00 | METAL GLAZE 1.8K 5% 1/8W |
| R209 | 1-216-234-00 | METAL GLAZE 33K 5% 1/8W |
| R210 | 1-216-246-00 | METAL GLAZE 100K 5% 1/8W |
| R221 | 1-216-204-00 | METAL GLAZE 1.8K 5% 1/8W |
| R222 | 1-247-774-00 | CARBON MELF 4.3 5% 1/5W |
| R223 | 1-247-774-00 | CARBON MELF 4.3 5% 1/5W |
| R224 | 1-247-774-00 | CARBON MELF 4.3 5% 1/5W |
| R225 | 1-247-774-00 | CARBON MELF 4.3 5% 1/5W |
| R226 | 1-216-176-00 | METAL GLAZE 120 5% 1/8W |
| R301 | 1-216-174-00 | METAL GLAZE 100 5% 1/8W |
| R321 | 1-216-198-00 | METAL GLAZE 1K 5% 1/8W |
| R322 | 1-216-236-00 | METAL GLAZE 39K 5% 1/8W |
| R323 | 1-216-164-00 | METAL GLAZE 39 5% 1/8W |
| R324 | 1-216-164-00 | METAL GLAZE 39 5% 1/8W |
| R325 | 1-216-232-00 | METAL GLAZE 27K 5% 1/8W |
| R326 | 1-216-221-00 | METAL GLAZE 9.1K 5% 1/8W |
| R351 | 1-216-218-00 | METAL GLAZE 6.8K 5% 1/8W |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| R352 | 1-216-230-00 | METAL GLAZE | 22K | 5% | 1/8W |
| R353 | 1-216-206-00 | METAL GLAZE | 2.2K | 5% | 1/8W |
| R354 | 1-216-230-00 | METAL GLAZE | 22K | 5% | 1/8W |
| R357 | 1-216-238-00 | METAL GLAZE | 47K | 5% | 1/8W |
| R358 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R359 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R360 | 1-216-228-00 | METAL GLAZE | 18K | 5% | 1/8W |
| R361 | 1-216-222-00 | METAL GLAZE | 10K | 5% | 1/8W |
| R362 | 1-216-234-00 | METAL GLAZE | 33K | 5% | 1/8W |
| R363 | 1-216-214-00 | METAL GLAZE | 4.7K | 5% | 1/8W |
| R364 | 1-216-226-00 | METAL GLAZE | 15K | 5% | 1/8W |
| R365 | 1-216-228-00 | METAL GLAZE | 18K | 5% | 1/8W |
| R366 | 1-216-202-00 | METAL GLAZE | 1.5K | 5% | 1/8W |
| R372 | 1-249-026-00 | (4140/4147/4150;E/4157) | | | |
| | | ...CARBON MELF | 120 | 5% | 1/5W |
| R372 | 1-249-405-11 | (4150;AEP) | | | |
| | | ...CARBON MELF | 100 | 5% | 1/5W |
| R373 | 1-249-026-00 | (4140/4147/4150;E/4157) | | | |
| | | ...CARBON MELF | 120 | 5% | 1/5W |
| R373 | 1-249-405-11 | (4150;AEP) | | | |
| | | ...CARBON MELF | 100 | 5% | 1/5W |
| R374 | 1-249-026-00 | (4140/4147/4150;E/4157) | | | |
| | | ...CARBON MELF | 120 | 5% | 1/5W |
| R374 | 1-249-405-11 | (4150;AEP) | | | |
| | | ...CARBON MELF | 100 | 5% | 1/5W |
| R375 | 1-249-026-00 | (4140/4147/4150;E/4157) | | | |
| | | ...CARBON MELF | 120 | 5% | 1/5W |
| R375 | 1-249-405-11 | (4150;AEP) | | | |
| | | ...CARBON MELF | 100 | 5% | 1/5W |
| R401 | 1-216-177-00 | METAL GLAZE | 130 | 5% | 1/8W |
| R402 | 1-216-254-00 | METAL GLAZE | 220K | 5% | 1/8W |
| R403 | 1-216-221-00 | METAL GLAZE | 9.1K | 5% | 1/8W |
| R404 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R421 | 1-216-177-00 | METAL GLAZE | 130 | 5% | 1/8W |
| R422 | 1-216-254-00 | METAL GLAZE | 220K | 5% | 1/8W |
| R423 | 1-216-221-00 | METAL GLAZE | 9.1K | 5% | 1/8W |
| R424 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R451 | 1-216-210-00 | METAL GLAZE | 3.3K | 5% | 1/8W |
| R452 | 1-249-388-11 | CARBON MELF | 3.9 | 5% | 1/5W |
| R453 | 1-249-388-11 | CARBON MELF | 3.9 | 5% | 1/5W |
| R454 | 1-216-244-00 | METAL GLAZE | 82K | 5% | 1/8W |
| R455 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R456 | 1-216-228-00 | METAL GLAZE | 18K | 5% | 1/8W |
| R457 | 1-216-230-00 | METAL GLAZE | 22K | 5% | 1/8W |
| R458 | 1-216-216-00 | METAL GLAZE | 5.6K | 5% | 1/8W |
| R459 | 1-216-238-00 | METAL GLAZE | 47K | 5% | 1/8W |
| R460 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R501 | 1-216-270-00 | METAL GLAZE | 1M | 5% | 1/8W |
| R502 | 1-216-191-00 | METAL GLAZE | 510 | 5% | 1/8W |
| R503 | 1-216-168-00 | METAL GLAZE | 56 | 5% | 1/8W |
| R504 | 1-216-246-00 | METAL GLAZE | 100K | 5% | 1/8W |
| R505 | 1-216-218-00 | METAL GLAZE | 6.8K | 5% | 1/8W |
| R506 | 1-216-210-00 | METAL GLAZE | 3.3K | 5% | 1/8W |
| R507 | 1-216-222-00 | METAL GLAZE | 10K | 5% | 1/8W |
| R508 | 1-216-222-00 | METAL GLAZE | 10K | 5% | 1/8W |
| R509 | 1-216-170-00 | METAL GLAZE | 68 | 5% | 1/8W |
| R510 | 1-216-214-00 | METAL GLAZE | 4.7K | 5% | 1/8W |
| R511 | 1-216-246-00 | METAL GLAZE | 100K | 5% | 1/8W |
| R512 | 1-216-246-00 | METAL GLAZE | 100K | 5% | 1/8W |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| R513 | 1-216-234-00 | METAL GLAZE | 33K | 5% | 1/8W |
| R514 | 1-216-233-00 | METAL GLAZE | 30K | 5% | 1/8W |
| R515 | 1-216-234-00 | METAL GLAZE | 33K | 5% | 1/8W |
| R601 | 1-216-222-00 | METAL GLAZE | 10K | 5% | 1/8W |
| R602 | 1-216-215-00 | METAL GLAZE | 5.1K | 5% | 1/8W |
| R603 | 1-216-203-00 | METAL GLAZE | 1.6K | 5% | 1/8W |
| R604 | 1-216-230-00 | METAL GLAZE | 22K | 5% | 1/8W |
| R605 | 1-216-197-00 | METAL GLAZE | 910 | 5% | 1/8W |
| R621 | 1-216-222-00 | METAL GLAZE | 10K | 5% | 1/8W |
| R622 | 1-216-215-00 | METAL GLAZE | 5.1K | 5% | 1/8W |
| R623 | 1-216-203-00 | METAL GLAZE | 1.6K | 5% | 1/8W |
| R624 | 1-216-230-00 | METAL GLAZE | 22K | 5% | 1/8W |
| R625 | 1-216-197-00 | METAL GLAZE | 910 | 5% | 1/8W |
| R701 | 1-216-222-00 | METAL GLAZE | 10K | 5% | 1/8W |
| R702 | 1-216-236-00 | METAL GLAZE | 39K | 5% | 1/8W |
| R704 | 1-216-216-00 | METAL GLAZE | 5.6K | 5% | 1/8W |
| R705 | 1-216-234-00 | METAL GLAZE | 33K | 5% | 1/8W |
| R707 | 1-216-258-00 | METAL GLAZE | 330K | 5% | 1/8W |
| R708 | 1-216-258-00 | METAL GLAZE | 330K | 5% | 1/8W |
| R709 | 1-216-258-00 | METAL GLAZE | 330K | 5% | 1/8W |
| R710 | 1-216-262-00 | METAL GLAZE | 470K | 5% | 1/8W |
| R711 | 1-216-206-00 | METAL GLAZE | 2.2K | 5% | 1/8W |
| R712 | 1-216-202-00 | METAL GLAZE | 1.5K | 5% | 1/8W |
| R713 | 1-216-270-00 | METAL GLAZE | 1M | 5% | 1/8W |
| R714 | 1-216-210-00 | METAL GLAZE | 3.3K | 5% | 1/8W |
| R715 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R716 | 1-216-202-00 | METAL GLAZE | 1.5K | 5% | 1/8W |
| R717 | 1-216-222-00 | METAL GLAZE | 10K | 5% | 1/8W |
| R718 | 1-216-190-00 | METAL GLAZE | 470 | 5% | 1/8W |
| R720 | 1-216-150-00 | METAL GLAZE | 10 | 5% | 1/8W |
| R721 | 1-216-210-00 | METAL GLAZE | 3.3K | 5% | 1/8W |
| R722 | 1-216-188-00 | (4150/4157) | | | |
| | | ...METAL GLAZE | 390 | 5% | 1/8W |
| R723 | 1-216-188-00 | (4150/4157) | | | |
| | | ...METAL GLAZE | 390 | 5% | 1/8W |
| R801 | 1-216-185-00 | METAL GLAZE | 300 | 5% | 1/8W |
| R802 | 1-216-186-00 | METAL GLAZE | 330 | 5% | 1/8W |
| R803 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R804 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R805 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R806 | 1-216-198-00 | METAL GLAZE | 1K | 5% | 1/8W |
| R807 | 1-216-182-00 | METAL GLAZE | 220 | 5% | 1/8W |
| R808 | 1-216-179-00 | METAL GLAZE | 160 | 5% | 1/8W |
| R809 | 1-216-181-00 | METAL GLAZE | 200 | 5% | 1/8W |
| R810 | 1-216-185-00 | METAL GLAZE | 300 | 5% | 1/8W |
| R811 | 1-216-182-00 | METAL GLAZE | 220 | 5% | 1/8W |
| R812 | 1-216-179-00 | METAL GLAZE | 160 | 5% | 1/8W |
| R813 | 1-216-176-00 | (4140/4150/4157) | | | |
| | | ...METAL GLAZE | 120 | 5% | 1/8W |
| RB701 | 1-232-911-11 | COMPOSITION CIRCUIT BLOCK | | | |
| RC1 | 1-235-832-11 | ENCAPSULATED COMPONENT(FILTER) | | | |
| RV1 | 1-228-996-00 | RES, ADJ, CARBON 47K | | | |
| RV2 | 1-237-744-11 | RES, ADJ, CARBON 47K | | | |
| RV3 | 1-228-994-00 | RES, ADJ, CARBON 10K | | | |
| RV501 | 1-228-995-00 | RES, ADJ, CARBON 22K | | | |
| RV601 | 1-238-254-11 | RES, VAR (WITH SWITCH) 80X2/100K/50KX2 | | | |
| RV901 | 1-238-874-11 | RES, VAR, SLIDE 50K/50K(WITH PC BOARD) | | | |

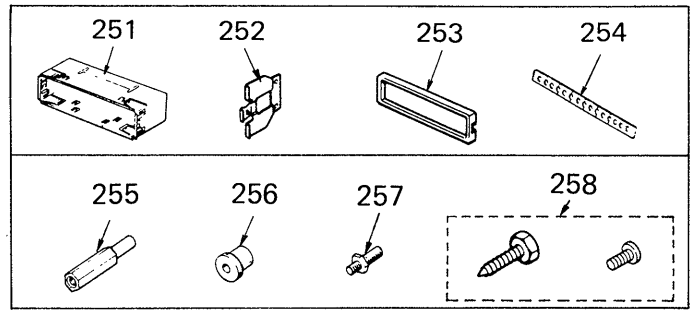
| Ref.No. | Part No. | Description |
|---|---|---|
| S701 | 1-553-510-00 | (4150;E)...SWITCH, SLIDE (9K/10K) |
| S801 | 1-554-813-41 | SWITCH, KEY BOARD (FM/AM) |
| S802 | 1-554-813-41 | SWITCH, KEY BOARD (SEEK -) |
| S803 | 1-554-813-41 | SWITCH, KEY BOARD (SEEK +) |
| S804 | 1-554-813-41 | SWITCH, KEY BOARD (1) |
| S805 | 1-554-813-41 | SWITCH, KEY BOARD (2) |
| S806 | 1-554-813-41 | SWITCH, KEY BOARD (3) |
| S807 | 1-554-813-41 | SWITCH, KEY BOARD (4) |
| S808 | 1-554-813-41 | SWITCH, KEY BOARD (5) |
| S809 | 1-554-813-41 | SWITCH, KEY BOARD (6) |
| S810 | 1-554-813-41 | SWITCH, KEY BOARD (MONO) |
| S811 | 1-554-813-41 | (4147)...SWITCH, KEY BOARD (DSPL) |
| S812 | 1-554-813-41 | SWITCH, KEY BOARD (MANUAL -) |
| S813 | 1-554-813-41 | SWITCH, KEY BOARD (MANUAL +) |
| S901 | 1-554-814-11 | SWITCH, SLIDE (REW/FOR) |
| S902 | 1-571-522-11 | SWITCH, LEAF (MUTE) |
| S903 | 1-554-790-11 | SWITCH, POWER (TAPE/RADIO) |
| T1 | 1-404-458-00 | COIL, DISCRI (PRIMARY) |
| T501 | 1-426-386-11 | COIL (RF) |
| T502 | 1-426-233-11 | COIL, MW RF (SEC) |
| T503 | 1-404-612-11 | AM IFT |
| T504 | 1-404-817-11 | TRANSFORMER, IF |
| T505 | 1-406-300-11 | COIL (OSC) |
| X1 | 1-567-250-11 | OSCILLATOR, CERAMIC (456kHz) |
| X701 | 1-567-713-11 | VIBRATOR, CRYSTAL (4.5MHz) |

ACCESSORY & PACKING MATERIAL

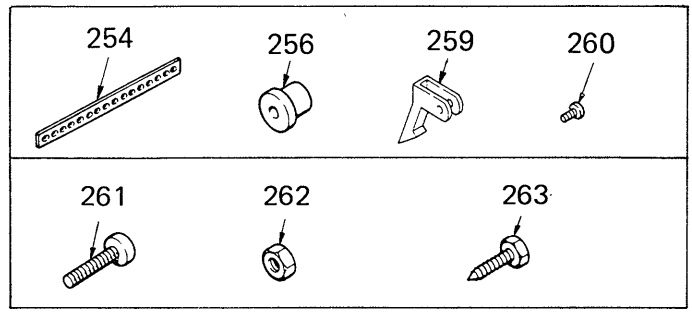
| | | |
|---|---|---|
| 251 | 3-323-219-01 | (4140/4147)...FRAME, FITTING |
| 252 | 3-339-403-01 | (4140/4147)...SPRING |
| 253 | 3-339-416-01 | (4140/4147)...COLLER |
| 254 | 3-310-655-01 | SUPPORT (ND), FITTING |
| 255 | 3-323-210-01 | (4140/4147)...ADJUSTOR, STUD BOLT |
| 256 | 3-349-410-01 | BUSHING |
| 257 | 3-323-209-01 | (4140/4147)...BOLT (4-5), STUD |
| 258 | X-3320-524-1 | (4140/4147)...SCREW ASSY (A) |
| 259 | 3-340-687-01 | (4150/4157)...KNOB (HANDLE FITTING) |
| 260 | 7-621-255-20 | (4150/4157)...SCREW +P 2X4 |
| 261 | 7-682-583-04 | (4150/4157)...SCREW +P 5X40 |
| 262 | 7-684-025-04 | (4150/4157)...N 5, TYPE 2 |
| 263 | 3-302-126-01 | SCREW, TAPPING (DIA. 5X20) |
| | 1-574-030-21 | (4140/4147)...CORD (WITH CONNECTOR) |
| | 3-323-206-01 | (4140/4147)...STOPPER (LARGE) |
| | 3-336-617-01 | BAG, PROTECTION |
| | *3-348-087-01 | (4140/4147)...CUSHION (TOP) |
| | *3-348-088-01 | (4140/4147)...CUSHION (BOTTOM) |
| | *3-349-448-01 | (4150/4157)...CUSHION (TOP) |
| | *3-349-489-01 | (4140/4147)...CUSHION (BOTTOM) |
| | *3-357-801-01 | (4147).....INDIVIDUAL CARTON |
| | *3-357-803-01 | (4140).....INDIVIDUAL CARTON |
| | *3-357-805-01 | (4150;E).....INDIVIDUAL CARTON |
| | *3-357-807-01 | (4157).....INDIVIDUAL CARTON |
| | *3-357-810-01 | (4150;AEP)...INDIVIDUAL CARTON |
| | 3-751-112-11 | (4140)...MANUAL, INSTRUCTION |
| | 3-751-113-11 | (4140)...MANUAL, INSTRUCTION |
| | 3-751-112-21 | (4147)...MANUAL, INSTRUCTION |
| | 3-751-113-21 | (4147)...MANUAL, INSTRUCTION |
| | 3-751-284-11 | (4150).....MANUAL, INSTRUCTION |
| | 3-751-285-11 | (4150).....MANUAL, INSTRUCTION |
| | 3-751-284-41 | (4150;AEP)...MANUAL, INSTRUCTION |
| | 3-751-285-41 | (4150;AEP)...MANUAL, INSTRUCTION |
| | 3-751-284-21 | (4157)...MANUAL, INSTRUCTION |
| | 3-751-285-21 | (4157)...MANUAL, INSTRUCTION |

## MOUNTING HARDWARE

XR-4140/4147




XR-4150/4157

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